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ART. 1.—*An inquiry into some of the causes of the Mortality of Infants.* By HENRY MILLER, M. D.

AMONG the many disclosures of medical statistics, which serve to enlighten us in relation to all that can affect health and longevity, none stands out more prominently than the *precariousness of life in the earlier periods of our existence.* Life, at best but brief and in all its stages environed by causes inimical to its continuance, is then peculiarly threatened with extinction. From a comparison of the most accurate obituary registers, it may be deduced that the deaths of children under a year old, constitute about a fifth of the whole number oocurring for a series of years. In Paris, for example, during the year 1818, the number of deaths was

22,421, whereof 3,942 or 17 per cent. were under the age of one year:—the deaths in Philadelphia during a period of twenty years, include rather a larger proportion of infants than the average assumed; in New York, according to the tables compiled by Dr. Lee,* embracing a period of sixteen years, twenty-five per cent., or one fourth the whole number of deaths were children under one year—the total number of deaths being 83,783, of which 21,330 were infants. The ratio of children decreases after the first year, being but 7,866 in New York, from one to two years; 6,787 only from two to five years; and it is remarkable how much greater risk to life the first than the second five years involve; thus, of the 83,783 comprised in these tables, 35,983 were children under five years, while only 2,232 were between five and ten years old.

But it is foreign to my design to enter into statistical details any farther than to establish the fact, that a proportionally larger number of children die within the first year than adults, and *an inquiry into some of the causes of this greater mortality, it is hoped, will be not without interest and practical utility.*

It is too obvious to need particular remark, that one cause of the greater mortality of children is their exposedness to certain diseases which, whether issuing from Pandora's box or not, are dispersed over the world, and may be said, almost without a figure, to guard the avenues to life. These diseases, not excepting croup and hooping-cough, often prevail epidemically, and carry off multitudes of children. Between some of them and the infantile constitution there is a particular affinity, adults being but seldom affected by them.

*American Journal of Medical Sciences, No. XXXVII.

Others, especially the Exanthemata, small-pox, measels, scarlet fever, &c., are not so exclusive in the selection of their subjects; but never wholly extinct, and often raging as epidemics, children are more apt to be assailed by them, because the constitution is not generally susceptible of a second attack, and but few have been ushered into manhood without having run their gantlet. But there are sources of disease to children, that are connate and do not adhere to them when grown up, which it most concerns us to investigate, and the first of these deserving attention, is a physiological peculiarity that is strongly stamped on their constitution, viz.: *Their excitability or vitality, in all the tissues and organs which it pervades, is more vivacious but less energetic than that of adults.* In confirmation of this we may refer to the manner in which some of their most important vital actions are performed. *The contractions of the heart* are much more rapid, the pulse of the infant being nearly double in frequency that of the adult, varying from 120 to 140 beats in a minute: at the same time it is evident that the pulsations are not so strong and the blood is not sent out in as bold a current in the vessels through which it circulates. Indeed, it is plain that the increased frequency is a compensation for deficient force, as the pulse of adults, who are suffering from debility, becomes frequent when it loses strength and volume. *Respiration* is carried on with greater rapidity, the inspirations numbering from 35 to 40 in the minute or nearly double those of the healthy adult; and yet, notwithstanding this activity of the respiratory process, the infant consumes less oxygen, showing that the function is less efficiently performed. *The calorific function*, as it may with propriety be called, although no special organ be allotted to it, is less energetic,—as has been proved by Dr. Edwards, who found that the

young of warm-blooded animals, selected for his experiments, have a temperature less than their parents, even when best protected from external cold, and that when they are removed and kept an hour or two from the mother, in an atmosphere of 50° to 68° Fahr., their temperature falls considerably and continues falling, until in the course of three or four hours, it stops a very few degrees above that of the surrounding air. Under similar exposure adult animals sustained but a slight reduction of temperature, their power of generating heat and resisting cold existing and being exerted in full vigour. The same experimenter, also, found that the capability of supporting reductions of temperature in the young of warm-blooded animals is inversely in proportion to their power of producing heat, and that consequently of two animals of the same species, the young will suffer less and recover more perfectly from the same degree of cold,—proving the greater resiliency of their vital power, or in other words, greater vivacity of excitability, which responds more readily to the counteractives of cold when judiciously applied.

These facts abundantly establish the vital or physiological peculiarity, which we have claimed for infants, and prepare us to appreciate its morbid tendencies. The excitability of the infantile system being greater, it results that stimulants or sedatives, all the modifiers to which it can be exposed and consequently all morbid causes, must, *cæteris paribus*, produce a more considerable effect on it than on that of the adult. The susceptibility of infants to cold alone is a very fruitful source of disease, which has been particularly pointed out by the experimental author, already quoted. "If the attentions which children require in climates and seasons little favorable to the preservation of their existence," says he, "were generally understood and put in practice, it would considera-

bly reduce one of the most powerful sources of mortality affecting that age in our climate. It is not confined to children whom the misery of their parents cannot guard from the rigour of the weather, but it operates to a great extent without being either perceived or suspected, in families enjoying affluence, and in which it is believed that the necessary cautions are taken, because cold being relative, it is difficult from our own feelings to judge of its effects on others, and because it does not always manifest itself by determinate and uniform sensations. They do not feel the cold, but they have an uneasiness or an indisposition which arises from it; their constitution becomes deteriorated by passing through the alternations of health and disease, and they sink under the action of an unknown cause."* In the management of children, a practice directly opposed to that which these observations suggest, finds favor with some, whose example, from their rank and intelligence, must exert a pernicious influence. By them it is contended that warm clothing only induces delicacy and greater sensibility to cold, diminishes the capability of resistance when unavoidably subjected to it, and that, therefore, the best fortification is exposure by times to its influence. There can be no doubt that many children fall victims to this hardening system, and that while some of iron constitution may emerge from the ordeal with increased robustness, many more have the foundation laid for disease which adheres to them for life. With all the precautions which philosophy can prescribe and maternal solicitude put in requisition, cold will claim its full proportion of mortality.

What has been said in relation to cold is equally true of excessive heat and of all morbific causes;—They more easily

*Edwards, on the Influence of Physical Agents, &c.

and seriously affect infants than adults, and it would seem from the most careful pathological researches, that infants are peculiarly obnoxious to inflammatory diseases, when even only a few days old, which may be referred to the same productive source, viz: their more lively excitability, and feebler power of resistance. This vital peculiarity may be regarded as a *general* predisposition to disease, which may remain innocuous if care be taken to guard against the application of exciting causes; but there are *special* predispositions which oftentimes bid defiance to all the vigilance and resources of art, and these may be said to consist in *the incompleteness of organic development at birth, and the necessarily progressive establishment of the circle of functions essential to the perfection of adult life.* To illustrate the extent and importance of this physiological law, and the morbid tendencies inseparable from it, will occupy the remainder of this essay. Before entering on this investigation, it is proper to advert briefly to a phenomenon observed in all the organs of the animal economy, when engaged in the healthy exercise of their functions, viz: they attract the fluids or movable organic matter towards them, and a larger amount of blood is circulated through them than in their quiescent state; in other words they become the seat of sanguineous congestion. This more profuse supply of fluids is the consequent of the increased movements of contractility, which the performance of all the vital functions requires, and the presence of the appropriate stimulus never fails to produce, at least in the healthy state. Hence, this fundamental vital law, on account of its constancy, has given rise to the axiom *uibi stimulus, ibi fluxus.* During the continuance of this physiological congestion the density and volume of the part are increased, and its frequent recurrence contributes to animal growth and vigor. Thus the muscles of locomotion

are augmented in size and acquire firmness by exercise, and become atrophied by being kept in a state of immobility, as in paralysis, where nervous stimulation is intercepted, or in fractures or painful chronic affections, where their motion is impracticable or would aggravate pain. In the next place, it must be observed that this exaggeration of the vital properties of a part, if it exceed certain limits, produces disease. and that the transition from congestion to inflammation is neither abrupt nor difficult. It is on this account that the highest degree of health, when all the functions are performed with an activity that diffuses a joyous sense of well-being over the economy, sometimes portends disease. If the locomotive muscles, for example, are too severely tasked, the congestion becomes fixed, and hence the soreness and stiffness which are complained of after inordinate or prolonged exertion, and we are told that it is not unusual for the muscles of the thighs of soldiers, after forced marches, to become painful and produce a chill and fever—to inflame and suppurate as after the most violent attacks of rheumatism.* Having premised these general observations we proceed to seek for sources of infantile disease, first, *in the establishment of the respiratory function.*

The first and most urgent want which the infant experiences is atmospheric air, without which its existence cannot be prolonged beyond a few minutes: and consequently pulmonary respiration is the first of the functions, progressively established, which is called into exercise. The development of the lungs is complete at birth, and so likewise is the pulmonary artery, destined to convey to them venous blood for its conversion into arterial; but the revivification of the blood having hitherto been effected by another provision, the lungs

*Broussais' Physiology.

existed in a collapsed state and the main current of the blood was turned from them by temporary channels. The fetal provision being abolished, it is indispensable that pulmonary respiration be promptly established; but this may be impeded by many causes, and hence *asphyxia neonatorum* comes in for a large share of the mortality of infants. In New York, the number of deaths from this cause, or *still-born*, in sixteen years, was 4,793, being in the ratio of one to twenty of the whole number, and one to four and a half of such as died within the first year.

In pursuing the diseases which threaten the existence of infants through this function, it must be observed that even if respiration be established, the lungs are peculiarly liable to congestion, producing either simple engorgement or extravasation into their tissue. Recent researches, particularly at the Foundling Hospital of Paris, have proved the frequency of this morbid state, and that pulmonary apoplexy, as extravasation is termed, is a much more common occurrence in children than adults. Nor is it diffiuclt to account for the increased liability of new born infants to pulmonary congestion; it is, as we may fairly presume, only an excess of the normal congestion existing in all organs during the active performance of their functions, induced the more easily, if it may be so expressed, in consequence of the raw and undisciplined state of the lungs at this period;—the stimulation and expansion of the lungs invite the afflux of blood into their tissue, the vessels of which are less able to bear the sudden inundation because their contractility has not acquired strength by exercise.

Inflammation of the lungs is not an unusual sequence of these congestions, and at this period it differs from the same disease in adults in being strictly confined to the lungs, with-

out extending to the pleura, as very generally happens at a more advanced period of life. What renders it probable that pneumonia in very young infants is purely the consequent of congestion, is the ascertained fact, that the most usual seat of the latter is that also of the former. The right lung, for example, is much more frequently congested than the left, owing to the common custom of placing children on the right side, and the posterior portion of the lungs than the anterior, from the operation of the same mechanical cause, and these, too, are the usual seats of inflammation. These pneumonias terminate in hepatization, suppuration, or softening, by which the lungs are disorganized and rendered unfit for the support of life. At a somewhat more advanced age, but still within the year, infants may be attacked by pneumonia from the same causes as adults, particularly from atmospherical vicissitudes, and Billard* believes that *shortness of breath, asthma, idiopathic coughs,* which some young persons have from their earliest recollection, are often the results of these early pneumonias. Infants are much more liable to pleurisy than is commonly supposed, and in Foundling Hospitals cases of this disease frequently occur at the most tender age, when children are exposed to the weather in the *creche* appropriated for their reception. When best provided for they are often the victims of this disease, as might have been inferred from their special susceptibility to cold, its most usual exciting cause.

The mucous membrane lining the air passages is always more or less congested in early infancy, as is clearly evinced from its redness, thickening and irritability, visible at their outlets and traceable throughout their whole extent in post

*Traite des Maladies des Enfans nouveau-nes et a la Mamelle.

mortem examinations. This is no more than might have been predicted from the stimulation of the first contact of air with such a sensitive surface. Here, also, in a particular manner, congestion lays the foundation for inflammatory affections, and hence the frequency of coryza, angina, and bronchitis in infants. On account of the great vascularity and sensitiveness of this membrane, or from some more latent and unexplained peculiarity, children are subject to a form of inflammatory action, which differs greatly in its character and fatal results from ordinary inflammation affecting adults, which M. Bretonneau proposes to distinguish from its congeners by the significant appellation of *diptheritis*. In this disease, to which the genuine croup belongs, the secretions poured out by the inflamed surface concrete into a membrane that contracts an intimate adhesion to it, and when the larynx or bronchia is its seat, offers such an obstruction to respiration as to cause death by suffocation. These diptherites furnish outlets to infantile life from which adults are nearly exempt; and when it is remembered that children are at least equally subject to ordinary acute inflammation of the pulmonary mucous membrane, as adults, and that this is attended with *more* copious secretion of mucus into the bronchia and *less* or *no* power of expectoration, we are prepared to form some estimate of the magnitude of this source of mortality to them.

Secondly. Let us direct our attention to the development, &c. of *the cerebro-spinal system, the brain and spinal marrow*, and inquire into the part it contributes to the catalogue of infantile maladies.

The brain of new-born children is subject to many serious congestions, and here, as in the lungs, there may be engorgement only or extravasation of blood on the surface or in the substance or venticles of the organ. This congestion is not

produced by a determination of blood, consequent to the incipient exercise of the cerebral functions, but by some mechanical impediment to the free return of venous blood from the brain. It is, therefore, passive in its character, and in this respect differs from the pulmonary congestion we have been considering. If formed before respiration has taken place, it may prevent its establishment, because the want of respiration, if communicated, is not felt by the centre of perception and consequently the muscular movements necessary for the dilatation of the chest are not excited. In overpowering cerebral congestions death takes place from asphyxia, and in estimating the causes of mortality among infants, they belong to an item already considered; but they may not be immediately fatal,—the child continuing in a languid state for several days and then expiring. In such cases the fatal issue is attributable to softening of the brain, its structure being entirely broken down, and, as it were, dissolved by the fluids penetrating it. But the connexion between the brain and lungs is such that their dependence is mutual; if cerebral congestion may impair or destroy respiration, any considerable embarrassment of respiration, on the other hand, produces an accumulation of blood in the right cavities of the heart, extending to the veins and sinuses of the brain in common with the rest of the body. Hence, the veins of the neck and head are seen to swell and the countenance to become tumid and discolored when respiration is but momentarily suspended by falls, passion, &c.

These congestions may be followed by inflammation, the excess of blood itself operating as an irritant. It must be observed that inflammation at this period attacks the membranes much more frequently than the brain itself or the spinal marrow, and that convulsions are the usual consequence

of such attacks. In twenty out of thirty new born children, who died of convulsions at the Paris Foundling Hospital, well marked inflammation of the spinal membranes was discovered, and in six of them the cerebral membranes were also implicated. These meningeal inflammations have a strong tendency to terminate in effusion of serum, producing dropsy of the brain, which is almost peculiar to children and too often resists every form of medical treatment. The termination in effusion is sometimes so rapid and preceded by such slight evidences of indisposition, that the real nature of the disease was not for a long time understood, and it was classed with dropsies instead of inflammations by the best nosologists. To these peculiarities it is doubtless indebted for much of its fatality: neither the parents nor physician apprehending danger sometimes until convulsions, dilatation of the pupils, &c. admonish how futile will be all efforts to stay its destructive march.

Our inspection of the infant in this aspect has as yet been confined to the bud of its existence; let us survey it for a moment when its leaves and flowers are expanding and it sends out so many tendrils to bind it to the mother's heart. Occupied at first only with satisfying the wants common to it and the zoophite, its time is past in sleeping and feeding, and it emits but feeble glimmerings of intelligence. This dormant state of the mental faculties corresponds to the *imperfect development of the brain.* The researches of Tiedemann and others have shown that prior to the ninth month, the substance of the brain is perfectly homogeneous,—the distinction of cortical and medullary matter being but faintly if at all perceived, while its consistency is absolutely that of paste. But between the ninth and twelfth month it acquires greater firmness, the cortical contrasts decidedly, by its red-

dish gray color, with the medullary or white substance, and it assumes the aspect and form of that of the adult. It is at this period, when the organization of the brain is going on most rapidly and its peculiar functions are most active that it is most obnoxious to disease, and this accords with the general principle already announced: the development of the organ and the assumption or more vigorous performance of its functions invite a determination of blood to it, and this predisposes to disease in the manner already explained. Hence, children are more liable to inflammation of the brain or its membranes at this period and more exposed to convulsions arising from irritation in other organs. Until now, indeed, other organs influence the brain but little and, for want of a common head during its minority, affect an independence which they are compelled to surrender when its empire is established. It is on account of this imbecility of the brain that there is so little sympathy between the different organs in early infancy, that inflammation may take place in them, ending in suppuration and the most profound lesions of structure, without its being announced by febrile reaction. But when the brain receives its development and becomes the centre of perception, to which impressions are conveyed from all parts, to be reflected thence to all, it forges the chain of sympathy which unitizes them and makes each responsive to the impressions, whether salutary or noxious, made on the rest. And now observe the difference; irritation cannot be set up in any of the tissues, much less can inflammation take place, without arousing the heart and producing symptomatic fever, or, if its force be directed to the brain, spasms or convulsions ensue. In a word, it is only at this period that the nervous system participates fully in the peculiar excitability that characterizes all the tissues in infancy.

Third and lastly, we shall look to *the digestive organs as a source of infantile diseases.* Here it must be observed, in the first place, that digestion is performed with much greater activity in infants than in adults, as is evinced by the more frequent calls of appetite and the more rapid nutrition of the body. We should be led to expect, therefore, conformably to the principle already established and more than once alluded to, that their digestive organs would be more frequently diseased; and this is what observation has proved, it being a well known fact that more children die from diseases of these organs than any other. In New York, from the statistical tables already referred to, it appears that 6085 of the deaths were from *bowel complaints*, including under this head diarrhœa, dysentery, and cholera infantum. The digestive organs are in a state of extraordinary development at birth, the alimentary canal having received its full proportional dimensions, with its valvulæ conniventes for enlarging its surface, and the liver being much larger proportionally than in the adult, and they are the seat of an active circulation of blood. The mucous membrane is always redder, more vascular and irritable than in the adult; and hence none but the blandest nourishment can be tolerated. This congestion lays the foundation for disease, which sometimes proceeds to build without any other materials, but much oftener with the assistance of such as are furnished by the officiousness of nurses, who, not content with nature's beneficent provision, ply their charges with indigestible or too stimulating aliment or drench them with irritating drugs. From indiscretions of this kind, and sometimes notwithstanding all the precautions that can be taken, the digestive mucous membrane in very young infants is affected with inflammation, which may be confined to the mouth, stomach,

or intestines, but is prone to spread from one section to another. Fatal gastritis and enteritis are not uncommon at this period, but their complication, gastro-enteritis, we are assured by Billard, is much more frequent. The morbid secretions of the inflamed membrane very often concrete into thin pellicles, covering the diseased surface, and this is not confined to the mouth, where it is so commonly observed, but extends to the esophagus, stomach, and intestines. Diarrhœa and cholera infantum are most apt to appear at a more advanced period, and M. Billard* thinks that a new development, which takes place about the same time, has something to do with these complaints. At about the fourth month, numerous mucous follicles make their appearance, throughout the whole tract of the alimentary canal, but in greatest profusion in the intestines. If existing antecedently they are so small as to escape notice; but their development is very active at this time, and in consequence of their increased vital energy, their secretions are greatly augmented. As these mucous follicles are possessed in greatest number by dogs and other carnivorous animals, whose digestion is very powerful, M. Billard is of opinion that they are designed to strengthen the digestive forces and that their development is preparatory to the change of diet which the child must shortly undergo. Irritation of these mucous follicles, or simple increased secretory action, according to him, may give rise to diarrhœa, especially the serous diarrhœa of authors, as he has verified by post mortem examination.

Synchronous with this, another development, pertaining to the digestive organs, makes its appearance; *dentition* commences and is progressively carried on until at about three

*Op. Cit.

years old, the child obtains its complement of deciduous teeth With regard to the morbid influences of this development there is, unfortunately, great discrepancy of opinion among pathologists. It may be observed, in general, that English writers attach great importance to dentition as a cause of disease, while the French depreciate or altogether repudiate it. Thus, of the former an eminent author, Mr. Bell, declares that "to enter upon a history of the consequences which result from the irritation of teething would be to treat generally of *all* the diseases of infancy; for there is scarcely a disease to which this period of life is subject, and scarcely a symptom appertaining to those diseases, which is not at times produced, or at least augmented by this cause."* On the other hand, a distinguished champion of the latter, M. Guersent, commences an article on this subject with this reflection: "the world ascribes most of the diseases of infancy to dentition; the difficulty of observing the diseases of early life, and the little positive information which we possess on this part of pathology, have contributed to radicate this opinion; and this prejudice resulting from our ignorance, like all other prejudices in medicine, has become popular."†

"Who shall decide when doctors disagree?" Why, doctors, of course, and, therefore we may be permitted to assume the umpirage.

Derangements of the digestive organs, especially diarrhœa and cholera infantum, a febrile state, and convulsive affections are the principal disorders ascribed to dentition, although Mr. Bell's list is much more extended. Now, it must be conceded that these diseases are much more apt to attack children during dentition than antecedently or subsequently: but this

*Anatomy, Physiology, and Diseases of the Teeth.
†Dictionnaire de Medicine.

may be only an accidental coincidence and such, indeed, is the explanation offered by M. Billard, who is strongly tinctured with the peculiar views of his French brethren in this respect. Diarrhœa, for example, he ascribes to the development of mucous follicles in the intestines, and convulsions to the activity of the organic process which is going on in the brain and spinal marrow at this period. With regard to the first, it may be observed that the congestion and increased excitability accompanying the follicular development certainly do strongly predispose to bowel affections; but it is doubtful whether disease would often result without the application of an exciting cause; if this be withheld, the predisposition will remain dormant in most instances, though it may sometimes be converted into disease by its very excess. The necessity of an exciting cause is argued from the fact that infantile diarrhœa may generally be traced to indigestible aliment, to cold, or some other cause which experience has proved to be adequate to the effect. The same strictures will apply to the second; while it is admitted that the congestion attendant on cerebral development may pass spontaneously into disease, much more frequently an exciting cause is necessary, and this may be found in local irritations of any of the organs, with which the brain sympathises: and among these gastric and intestinal irritation is known to be a frequent cause of convulsions in children. Now, the question is, can dental irritation be sufficiently great to prove an exciting cause of the diseases imputed to it? It is evident that when the process of dentition is regularly and healthily performed, it cannot be a source of disease, because being a natural development no more excitement should attend than what is necessary for its accomplishment. Some irritation of the gums and increased salivary secretion may be expected as a consequence of the

accompanying congestion. But because dentition is a natural function, does it follow, as M. Billard would insinuate, that it ought *always* to be effected without accident or risk to the child? What becomes, then, of his explanation of the frequency of bowel affections? Is not the development of follicles as natural, and should it not, therefore, be as harmless as the development of teeth? Regarding the subject, then, apart from all prejudice or sectarian bias, we are constrained to admit that both may become morbid, and consequently sources of disease to infants. But in the case of dentition, if we mistake not, besides the morbid liabilities accompanying it in common with all analogous processes, there is a peculiar source of irritation which is not found in the other developments to which we have referred. A glance at its physiology will disclose this specialty and enable us to appreciate its importance. The organic arrangement for the formation of the teeth is somewhat complicated, consisting of a vascular and nervous pulp, covered by a very delicate membrane, and these again invested by a fibrous membrane of very firm texture, composed of two distinct layers. The bony part of the tooth is secreted by the fine membrane of the pulp, and as the ossification advances from within outwards, the cavity occupied by the pulp is contracted, until reduced to the dimensions of the hollow of the perfect tooth. The ossification being completed, the inner surface of the fibrous coat takes on the office of secretion and furnishes the tooth with its covering of enamel; this being done, the fibrous membrane is no longer of any use, and must be removed to make way for the tooth before it can advance above the gums. Its removal is effected by the action of the absorbent vessels.

From this succinct exposition it is apparent that growth and decay are going on at the same time in this process, and

that in order to its harmony there must be perfect coincidence in the work of composition and decomposition: for, should the fibrous membrane *not* be removed in time, a barrier will be opposed to the emancipation of the teeth, and pressure continuing to be made on it by the advancing teeth, irritation first and then inflammation must be excited in its tissue. This is what happens in fact when dentition is morbid; and the inflammation extending to the gums, they become red, tumid, and painful, ending sometimes in ulceration. When it is remembered that inflammation exalts the sensibility of all the tissues, some idea may be formed of the pain that must be produced in the inflamed fibrous membrane, whose tension is at the same time increased, and this pain, Mr. Bell alleges, is exasperated by counter-pressure on the sensitive pulp itself.

The question now recurs, is there here a sufficient focus of irritation to produce any of the morbid effects ascribed to dentition? With regard to convulsions, there can be no hesitation in answering the question in the affirmative, for we are familiar with them as the consequence of other local irritations. Intense pain in any part may modify the brain so as to give rise to convulsions, nor can the minutest post mortem scrutiny always detect inflammation in this organ or its membranes in such cases. Ought it to be esteemed strange that a febrile state of system may arise from dental irritation? With what are we more conversant than symptomatic fever from local injuries attended with less pain? Ought we to be surprised that derangements of the digestive organs should proceed from this cause? The membrane that lines them is implicated in the mouth and the irritation of this point spreads with peculiar facility in infants, to say nothing of their sympathetic participation in the derangement of the nervous and circulating systems.

But, as it may be said that this reasoning is analogical only, and affords at most but presumptive proof of the point at issue, we shall adduce evidence which, we think, must be regarded as conclusive. That the morbid effects in question are sometimes produced by dentition is to be inferred: first, from the fact that they occur simultaneously with the inflammation of the gums and disappear when this subsides, to be renewed when the inflammation is again excited by the irritation of other teeth. Second, from the amelioration or complete removal of all the symptoms when the dental irritation is relieved by a free incision through the gums and fibrous membranes, an operation which, notwithstanding all the clamor that has been raised against it, is attended with little or no pain, involves no risk, and greatly facilitates the protrusion of the teeth. There is a vulgar prejudice against this operation which supposes that as the scar which follows the incision is *harder* than the gums, it will be more difficult for the teeth to make their way through it, and this prejudice is fostered by those who are incredulous as to dentition's being a cause of disease, and taken advantage of by charlatans, who have some nostrum to recommend instead of the lancet. It is not surprising that the latter should hold this up as a scarecrow to frighten parents to the use of ridiculous "soothing syrups," but it is both surprising and reprehensible that an enlightened physiologist, such as M. Billard, should countenance such an absurdity. We had supposed that it was known to every tyro in medicine, that all adventitious tissues designed to repair breaches of original structure, are possessed of *less* vitality, and that, though their *hardness* may be greater, they are *less* capable of resisting a vital force. Hence, when inflammation attacks a part or pressure excites the absorbents to action, cicatrices, if any exist, are the first to yield to ulcera-

tion or absorption. The teeth will, therefore, make their way through this *hard* scar much more easily than through the original gums.

From our subject, imperfectly as it has been handled, it would appear that disease is inseparable from the laws of organization, ordained for the production and growth of living beings, whose existence depends on the establishment of certain functions, the exercise of which may induce such derangement as to extinguish life, before the machinery it animates is put in harmonious motion. It is melancholy to reflect on the wrecks that are so thickly strewed on the broad and impetuous river of life in the very commencement of our voyage. Of the millions of frail barks launched on its treacherous bosom, with their gay pennants fluttering in the breeze, how few reach the haven of manhood, how many are ingulphed in infancy!

Although such is the constitution of nature, we may reasonably hope to mitigate the calamities of our lot, by the study and observance of her laws, and without a knowledge of those pertaining to organization, the diseases of infancy cannot be understood or scientifically treated. It must be allowed, indeed, that in spite of all the lights of science a degree of obscurity veils the diseases of this early period, from which those of a more advanced age are exempt. The diagnosis of the latter, besides being more strongly marked perhaps, is greatly assisted by the disclosures of the patient himself, an advantage which is denied to the former. But this obscurity is not as great as is commonly alleged: for, though infants have not the faculty of speech, their physiognomy, including not merely expression of countenance but the manner in which the different functions are performed, is very significant and reveals oftentimes not only the seat but nature of the

diseases to which they are a prey. This inarticulate language cannot be learned from lexicons nor can it be taught, except in a very general manner, in the prelections of the schools: it must be acquired by the diligent observation of nature, for which the major number of practitioners have so little relish that they turn from it with a feeling of irksomeness, if not with disgust. Spread before them a list of diseases which have been dissected by catachetical inquisition and methodically arranged according to their several groups of symptoms, leaving them only to inquire *by responses* whether the patient is suffering from this or that disease, and the task imposed has nothing in it revolting; the whole nosological nomenclature is patiently ransacked, and the disease singled out and prescribed for; but ask them *to observe* for themselves and in default of oral language to catch the lights and shades of disease, which no language can depict, and they are ready to sing a requiem to such aspirings, composed of lamentations over the darkness of pathology, which, it may be, exists only in their own minds. This blameable apathy has, in a measure, consigned the diseases of infants to the ignorance of nurses and the tender mercies of quacks, whose congenial element is *darkness*, real or fictitious. It is incumbent on Medicine to rescue infants from such incompetent hands, and by the profound study of the peculiarities of their organization and diseases to curtail the fearful mortality to which they are exposed.

ART. II.—*Case of Fatal Abscess of the Right Kidney.* By L. POWELL, M. D. of Louisville.

MR. B. S., ætat. 30, of tall stature, spare habit, and irritable temperament, had for several years been more or less affected with a sense of weight and fulness, with a feeling of uneasiness or obscure pain in the lumbar region, accompanied with an irritable state of the bladder, the urine being habitually discharged at short intervals, in small quantity and of unnatural color and consistence, being always more or less turbid, sometimes milky and frequently of brownish red color and depositing on standing more or less sediment.

When consulted in his case, and informed of the symptoms just detailed, I could not fail to infer a serious irritation or perhaps a subacute inflammation of the kidneys to be its true diagnostic character or the real pathological condition.

In accordance with this view he was restricted of exercise, confined to a strict anti-phlogistic regimen, subjected to one general bleeding and to frequent cuppings over the loins, to the moderate use of laxative medicines and demulcent drinks, and finally to counter irritation by a seton inserted in the back and worn for several months. Under this course of treatment the symptoms were palliated, and the comfort of the patient improved. It was obvious, however that no permanent benefit had accrued, and in the vague hope that travel and mineral waters might restore his health, the unfortunate gentleman visited the most celebrated springs of Virginia, made frequent and extensive excursions through the country, and sojourned one winter in the south, by which time a very sensible impairment of his general health had succeeded to the local symptoms. He returned to Louisville late in the

Fall of 1837, and again called my attention to his condition. He was now much reduced in flesh and strength, his complexion very sallow and the whole skin unnaturally dry and harsh, while the cuticle on the palms of the hands and the soles of the feet was exceedingly thickened and marked by fissures or cracks. But the most striking feature of the case in its present aspect was a large abdominal tumour occupying the right iliac and right hypochondriac regions and extending laterally in the opposite direction to a short space beyond the umbilicus. The tumour was in shape an irregular oblong of uniform surface, exceedingly tense and rather unyielding but slightly elastic under pressure. In reference to the further treatment of the case it was of the first importance that the nature and origin of this tumour should be satisfactorily ascertained. The difficulty of this task, however, was not a little increased by the various and discrepant opinions which had been passed upon it by the several medical gentlemen whom the patient had consulted at different points. Looking to the situation of the tumour, and its apparent connection with the symptoms of renal inflammation which had so long and so constantly preceded it, I felt myself justified in the decision that it resulted from and consisted in some morbid growth or structural change in the kidney itself.

After repeated examinations of the tumour, in which I was accompanied and aided by Dr. Flint, professor of Surgery in the Louisville Medical Institute, we thought that fluctuation was perceptible, and that the case in its present stage might be considered and treated as Abscess of the Kidney.

We accordingly made an incision into the tumour, when purulent matter of ordinary consistence and of greenish yellow color issued from the orifice, and continued to flow until full half a gallon had been collected in the vessel which re-

ceived it. A few days after the orifice having closed was again opened, when an additional quantity of pus was discharged, amounting perhaps to about one quart. From this time the orifice remained open, and the matter continued to be spontaneously discharged from day to day, in various quantity. For several weeks the case wore a most favorable aspect; no constitutional disturbance succeeded to the operation: the patient became cheerful in the hope of recovery, slept soundly, ate and digested a fair allowance of food, and enjoyed a regular state of the bowels, and an improved condition of the surface. At about four weeks from the date of the operation upon the tumour, and after an anxious and sleepless night, consequent upon an important transaction of business in which he had been involved, he was seized with a strong rigor, to which ensued in regular succession, and by daily paroxysms, a well defined hectic fever, bringing in its train cough, night-sweats, colliquative diarrhœa, which terminated his life about ninety days from the opening of the abscess.

A post mortem examination exhibited the following circumstances:—The abdominal points were divided by an incision over the tumour extending from the sternum to the pubis, by which the tumour, consisting now of the half empty sack of the abscess, was brought into view, extending from the natural situation of the kidney below, to the concave surface of the liver above, and united by old and strong adhesions, to all the contiguous parts and organs, to the walls of the abdomen, the folds of the intestines, and the concave face of the liver—where the union was so extensive and intimate as to be inseparable by the knife, seeming to constitute, with the liver, a continuous and identical structure of morbid condition and aspect. On enlarging the opening in the sac, and sponging out the matter which it contained, no trace of the

natural structure of the kidney remained; the substance of that organ seemed to have been utterly disorganized and destroyed, leaving only its original tunic now converted by inflammation and pressure into the diseased, thick walls of the abscess.

On exploring the cavity of the abscess, it was discovered to be divided into several compartments or pockets, in each of which was contained a quantity of urinary calculi of various sizes, from a millet-seed to the largest garden pea, and so lodged and compacted in these pouches, that they could not find their way into the general cavity of the abscess, while on the other hand, they could not be carried forward to the bladder—the renal orifice of the ureter having been completely obliterated by inflammation. The kidney of the opposite side was of normal structure, but rather paler than natural, and enlarged considerably beyond its usual size, and containing in its pelvis a single calculus of a soft and friable texture, marking the incipient stage of a similar disease in the left kidney, to that which had already destroyed the right. The dissection was not extended to the lungs or other organs, in consequence of the intention of the friends of the deceased to convey his body for interment to a distant county. Enough, however, had been revealed to furnish to me the satisfactory assurance, that I had not erred in the diagnosis of the case, and to convey to his friends, the melancholy conviction that no course of treatment could have conducted it to a different issue.

ART. III.—*Remarks on Secale Cornutum in Pseudocyesis Molaris.* By DR. JOSIAH HIGGASON, of Somerville, Tenn.

IN the latter part of December 1838, I was called to see Mrs. G., laboring under excessive uterine hemorrhage. So alarming was her exhaustion from loss of blood, that, together with other means, it was necessary to have recourse to the tampon. She was then directed to lie in bed, use light diet, keep her bowels open by rhubarb and magnesia, with occasionally a small dose of calomel, and when threatened with a return of hemorrhage, to use pills composed of opium, ipecacuanha and acetate of lead. For about a week she had frequent returns of flooding, generally light, but of sufficient severity to require the pill. She had also rigors, without the sensation of coldness, which I have often found to be indicative of the existence of some extraneous body within the uterus. In the intervals of hemorrhage, she had a discharge of a sanguineo-mucous character from the vagina, which had continued with greater or less profuseness for twelve months.

The patient indulged the belief that the solid parts of a fœtus were retained within the uterus, and that this was the source of all her suffering, which led to an examination. The uterus was found to be of the size which it attains about the third month of gestation, with the cervix elongated and the os tincæ rigid. The examination satisfied me that I had taken a wrong view of the case—I had regarded it as one of a disordered state of the menstrual function, and had prescribed for it as such. I was now at a great loss to determine its precise character. Did the uterus contain a dead fœtus? If so, it must have been retained for twelve months, since, during that period, her health had been too bad to admit of conception. About a year previously she was supposed to have aborted, and the retained substance, she believed, had existed

within the uterus from that time. She recovered but imperfectly from the effects of the abortion, and continued to be pale and nervous, and to suffer with the discharge above referred to, which was occasionally so free, as to demand the use of astringent remedies, purgatives, &c. An alarming hemorrhage at the time specified, made it necessary to render her prompt and regular attention. She was found free from labor pains—the uterus had been quiescent for months—the cervix was firm, and the os uteri unyielding, but as the danger of the patient was imminent, it was determined, on consultation with Dr. Gray, a relative of the lady, to put her upon ten grain doses of ergot, every two or three hours, with a view to the production of light, but continued action in the uterus, thereby soliciting the relaxation of the parts. The remedy was commenced about 10 o'clock, A. M., and persevered in for four-and-thirty hours, when an organized, firm substance, about four inches long and two in diameter, was expelled. It was enveloped in a smooth, white, membranous coat, which had no appearance of having ever been attached to the uterus:—it was pear-shaped, corresponding to the cavity in which it had reposed, and in its structure spongy, or cellular, with tough, ligamentous bands, passing through it in different directions.

During the operation of the ergot, the following effects were observed with interest:—at first the hemorrhage was increased, but subsided when the tonic contractions of the uterus were established. After the first three doses, the patient complained of pain and uneasiness in the back, which gradually increased until the contractions became general, and occasionally severe. The remedy was then intermitted for a time, lest injury should result from too much pressure upon the still unyielding parts. Gradually, however, this rigidity

was found to give way, until the cervix was obliterated, and the os tincæ relaxed, and the contents of the uterus expelled with but little pain. After having been established the pains never entirely ceased until the end was accomplished. The increase of hemorrhage upon the first administration of the remedy is always to be expected under similar circumstances. Repeatedly have I used it after abortion with a view, not only to the expulsion of portions of involucra, but mechanically to diminish the cavity of the uterus, thereby, in a manner, closing the mouths of the bleeding vessels, and always with this effect—first, an increase of the flooding, and then a diminution and suspension of it.

The above is the only case in which I ever employed ergot in a rigid state of the os uteri, and have to regret that I did not resort to it a year earlier, since the patient would have been rescued from many months of anguish and apprehension. The expulsion of the foreign body would, probably, have been effected with less difficulty, as the parts, it may be presumed, were in a more relaxed condition. In regard to the medicinal properties of this article, an unfortunate diversity of opinion prevails among medical men, being esteemed inert by some, and incapable, under any circumstances, of producing uterine contractions; by others, as efficient only at the full period of gestation; while not a few would discard it altogether on account of the uncertainty of its operation—small doses sometimes exciting violent contractions, and at others, under apparently a similar state of the case, large doses proving inefficient.

I have employed ergot in my practice for a dozen years, and have seldom been disappointed in its effects. I have used it in abortion, where that event was already unavoidable, to quicken the expulsion of the ovum, and have administered it immediately afterwards, to arrest hemorrhage by di-

minishing the uterine cavity. I have given it during labor to strengthen and accelerate the pains when the presentation was favorable, and the os uteri dilatable, where otherwise, doubtless, the forceps would have been required. In retention of the placenta, whether from adhesion or inertia, I have also administered the article, and uniformly with the desired effect. My mode is to give it in substance finely pulverized, in doses of from ten to thirty grains, at longer or shorter intervals, according to the urgency of the case and the effect produced, and my confidence in its specific action upon the womb is as great, as in the peculiar action of tartar emetic upon the stomach. Of the unfavorable occurrences said to result from its administration—hour-glass contractions, rupture of the uterus, &c.—I have seen none, bu' on the contrary in the only case of rupture of that organ which I ever witnessed, not a particle of the medicine had been employed.

The history of a single case of its employment in retained placenta will close these remarks. It is one of many of a similar character:

Mrs. ——— in the year 1837, had been delivered of an infant eighteen hours, without the supervention of labor pains, and in this inert condition of the uterus, the placenta was not expelled. I attempted to remove it by Velpeau's method, but without success. The hand was not introduced because my experience in the virtues of ergot taught me to expect that it might be extracted by an easier method. Thirty grains of the article were administered, and the dose was repeated in fifteen minutes. Uterine contractions were not long in coming on, and by one effort of the organ the placenta was expelled. The pains continued to be so violent that an opiate was thought necesary, showing that the last portion of the medicine ought not to have been given.

REVIEWS.

ART. IV.—*Lectures on the Theory and Practice of Physic, delivered in the College of Physicians and Surgeons of the University of the State of New York. By the late* David Hosack, M. D. L. L. D., F. R. S., *Professor of the Theory and Practice, and of Clinical Medicine in that Institution. With an Introductory letter, by* Nathaniel Chapman, M. D., *Professor of the Theory and Practice of Medicine, in the University of Pennsylvania, &c. Edited by his friend and former pupil,* Henry W. Duchachet, D. D., *Rector of St. Stephen's Church,* Philadelphia. Herman Hooker, Chesnut street, 1838. p. p. 699, 8vo.

THE author of this volume was classed, during his life-time, with the ablest teachers of medicine in the United States; and its recommender and endorser holds, at present, a similar rank. We are justified, moreover, in alleging that the production of the volume is the result of the labor of not less than *thirty years*, industriously employed by the writer in observation, reading, composition and thought. It is therefore a work of high authority, and must be regarded as presenting a full and fair view of the treatment of diseases in the Atlantic States, as well as of the style and manner *in* which, or at least of the doctrines and directions *through* which, their treatment is taught in the medical schools of that portion of the United States.

Did any doubt exist as to the correctness of these remarks the commendations contained in Professor Chapman's "In-

troductory Letter" would dispel it. In his reference to the "Lectures" of which the volume consists, the Professor says:

"They embody a very large mass of curious and *useful* information, *clearly* and *agreeably conveyed.* Excepting some *pathological doctrines* I find little in them to which I would object. *The practical part I consider sound, or at least it corresponds very much with my own views.* Long and extensively engaged in the profession, and with his acute and discriminating mind, he, (Professor Hosack) could scarcely fail to arrive at just conclusions in whatever regards the management of disease. He deserves, and will no doubt rank, among the most authoritative of our writers. You (the Editor) have done well in publishing the work. *No effort shall I spare to promote its distribution; and I mean especially to recommend it to the attention of my class.*"

Such are the high and imposing auspices and recommendations to favor, under which this volume is ushered to the world. Is it worthy of them? and does it fill up completely the measure of expectation and confidence they are calculated to excite? Without assuming the responsibility or claiming the prerogative of giving to these questions categorical answers, we shall endeavor, by a brief discussion of the matter they embrace, to enable our readers to answer them for themselves.

Like all other productions of the kind, this which lies before us consists of an exposition of principles, and a system of practice. And with neither the one nor the other do *we* find reason to be satisfied; at least in their relation to this section of country where we ourselves reside, and respecting which alone we presume to decide. Whatever may be their amount of *aptitude* and *value* in the Eastern States, (and Professor Chapman is earnest in their praise) we are greatly mis-

taken if they have much of *either* in the States of the West. We do not positively say that they are better fitted to do mischief than good in this part of the Union; but we do say that nothing could tempt us to teach or recommend them to western students of medicine; and we should deeply grieve to see a sick friend treated in conformity to them. In truth they would be, of themselves, sufficient to convince us, were we not already convinced by other considerations, which have long been familar to us, that the Professors of the Atlantic schools are but very moderately qualified, or rather not qualified at all, to communicate to their pupils such views of *practical* medicine, as are suited to the diseases of the Mississippi Valley. How indeed can the case be otherwise? How is it possible for those professors, however able and learned they may be, to teach successful modes of treating diseases which they have never seen, and of whose ruling and peculiar features and character they are necessarily uninformed? In fact they neither do possess nor can possess, such resources for teaching. Nor can they ever attain them, unless they pass the mountains, and spend years in the midst of us, observing, studying, and treating our complaints. Let them thus act, and thus accomplish themselves, or else confine their instructions to the cure of maladies with which they have been conversant, and detail them only to the medical pupils of their own region For *practical* purposes in the West, those instructions have neither fitness nor value. However *sectional* and exceptionable these sentiments may be considered in some places, and represented by some Journalists, they are too true and plain to be candidly *opposed by either fact or argument*, though they may be sturdily *denied*, and dogmatically *condemned*. And sufficient evidence to this effect shall be presently adduced. But a few farther introductory remarks must be previously offered.

In matter as well as in manner, the book we are examining is in accordance only with by-gone days—with some period we mean of the *eighteenth century*. Were its title "A TALE OF OTHER TIMES," it would not be inappropriate. Had it been published in 1788 (*fifty* years ago) instead of 1838, and in Germany or Prussia, instead of the United States, it would have been somewhat in harmony with the period and the place, and with the then-existing condition of the medical profession. But issuing from the American press at the *present* period, with the substance which makes it up, the shape which marks it, and the parade and ostentation put forth in its preparation, it is one of the most ill-timed, inappropriate, and *dislocated* productions we have ever witnessed. It is in manner, morever, a thing entirely apart from the present age—too starched and stiff, formal, dogmatic, and authoritative, for the free and easy, and flexible spirit of 1839. It is as much out of fashion, and as ill-suited to the medical taste and habit of the present day, as would be the bag-wig and the three-cornered hat for the medical head, or the flowing, plaited, and tasselled gown for the Professor's shoulders, when he presents himself to his class. It is much more characterized too by research and learning, than by judgment, science, and experience—especially that judgment and that experience, which could be made available in the treatment of our *western* diseases. Nor is this all. Though we shall not pronounce it a work of pedantic ostentation and learned parade; yet, were we to do so, to convict us of error would be a difficult task. We venture, however, to say, that a student of medicine may pore over such a book, or listen to the reading of it in the form of lectures, until he has memorized every word of it, and still be no better qualified to become a *successful practitioner* in the Mississippi Valley, than he would be by simply reading over

Boerhaave's aphorisms, Cullen's Outlines, or Gregory's Conspectus. And neither of these measures, nor any degree of attention he can pay to *eastern* lectures, or to the reading of European books, published during the last century, nor all of them combined, can fit him so well for the cure of western complaints, as will a faithful attendance on even a *single course* of *practical* lectures, prepared with ability and judgment, and well delivered, by a *western* teacher, who is thoroughly versed in the knowledge and treatment of such diseases.

While they manifest a state of marasmus, as respects originality, and a profound investigation of the laws of living organic matter, as they show themselves in the human body, in the phenomena and functions of health and disease, these "Lectures" are *hypertrophied* or *dropsical* in references, authority, and learned quotation. And this is true as respects almost every topic of which they treat. Whatever of thought they may contain is so enveloped in studied erudition, as greatly to obscure it, and so interwoven with the numerous opinions of other writers, as to puzzle the reader, and sometimes defeat him in his efforts to disentangle it. Much more deeply and annoyingly must it have puzzled a class of pupils, but slightly versed in medicine, to follow, comprehend, remember, and digest such a mass of learned matter as the "Lectures" contain, when they were merely read to them. The Professor seems never to have forgotten either himself, his authorites, or quotations, in his devotion to his subject. Nor is the matter at all mended by the fact, that such authorities are mostly the out-of-print and inaccessible works of ancient and early-modern writers, and the quotations too frequently in the Latin tongue. To *recent modern* authorities (those I mean that have appeared within

the last twenty or thirty years) his references are comparatively few. In proof of these remarks, a few special notices of the "Lectures" shall now be given. We shall begin with the Professor's Nosology, in which he has labored technically and abstractedly, and threaded a tangled wilderness of nomenclature, to a great extent, but, in our opinion, as regards utility, to very little purpose. Though we shall not exclaim, with the late Professor Rush, "delenda est nosologia" —let nosology be expunged from medicine; yet, while it is certainly the most difficult and repulsive branch of the profession, we regard it as by far the least instructive and useful one.

This subject, we say, our author has labored to an extravagant and unprofitable extent. His definition of it moreover we consider erroneous and deceptive. He denominates it an "arrangement of diseases in such order as will be best calculated to *give us a knowledge of them.*" To this "definition" (if so it can be called) we confidently reply, that a mere "*arrangement*" of diseases gives us *no* "knowledge of them." It gives us uninstructive *names* and *scholastic places* for them, and nothing more. When we have acquired, through other channels, a "knowledge of diseases," these names and places serve the purpose of remembrancers; and there their usefulness ends. As respects all other things the same is true. The things themselves, whatever they may be, must be learnt *first*, else their names are but empty and unprofitable sounds. True, in the nomenclature of diseases now forming, there is somewhat more of meaning and common-sense. The reason is plain. An effort is making to render the "sound an echo to the sense"—to affix a name which will express the leading characteristic of the complaint it designates. Yet still is the instruction thus conveyed exceedingly limited.

Names however must be given; but they should never be relied on for "knowledge."

As is his uniform custom, in relation to every topic he touches, our author crowds his lecture on nosology with all the names of nosologists he is able to muster. Nor does he observe in the citation of them any regular chronological order. He begins we think with Sydenham and Baglivi. Then come Aretæus, and Cœlius Aurelianus; Johnston, Sennertus, and Morgagni; Mead, Good, and Chapman; Boerhaave, Riverius, Hoffman, and Sauvages; Linnæus, Vogel, Sagar, McBride, and Cullen; with some others perhaps of minor note.

Cullen's Synopsis nosologiæ the Professor details at full length, consisting of four classes, eighteen orders, or perhaps more, and one hundred and fifty genera. To many points of this synopsis he offers objections, and then favors us with his own nosology. This contains eight classes, twenty-four orders, and one hundred and ninety-eight genera. Professor Chapman, as we have already shown, assures us, in his "Introductory," and recommendatory "letter," that, certain pathological doctrines excepted, he approves of the volume before us, by the lump. But nosology has no connexion with pathology. Of course the able Philadelphia Professor sanctions the nosological arrangement of Professor Hosack, with its two hundred and thirty significant appellatives! And we ask him seriously and respectfully, whether the fearful task of the commitment to memory of this long catalogue of "hard words," supposing it to be mastered, would furnish a pupil with a tittle of knowledge that would be useful to him, either in the true *science* of medicine, or in the management of disease? Nor will he venture to answer our question in the affirmative. And we ourselves very confidently

affirm, (without the least apprehension of being contradicted, and without regarding contradiction, should it occur) that a load on the memory, so multifarious and weighty, as Professor Hosack's nomenclature must produce, would give no shadow of aid in the cure of *western* diseases. Far from it. On the contrary, a crop of weeds so dense and useless, perhaps we might say so decidedly noxious, would be much more likely to choke and stint some salutary plants, or expel them entirely from the garden of the mind.

The next portion of the volume we are considering, on which we shall offer a few remarks, is the lecture "on fevers in general." This lecture we fix on for our purpose, not by way of selection, but because it comes next in the course of the book.

Here we have another display of learning to excite our wonder, and another amasment of authority to edify us. After referring to Hesiod, and quoting Horace, and speaking most learnedly of Pandora and her box, our author turns lexicographer, and favors us with a knowledge of the derivations and classical meanings of *fever, symptom, pathognomonic, diagnosis,* and perhaps a few other terms of Greek and Latin origin. His next attempt is to *define* fever. And here he summons from the grave, and from all times and places, a cloud of witnesses so dense, self-conflicting, and impenetrable, that instead of aiding him in the exposition and illustration of his subject, they do little else than obscure and distract his own views, and his reader's conception, by diffusing discord and darkness around him.

After duly descanting on the doctrines of fever maintained by Cullen, Boerhaave, Sauvages, and other moderns, and dissenting from each and all of them, he goes back to a remoter period of medical history, and musters, as auxiliaries in the

display he is making, the opinions of ancient physicians, and of those of an early date in modern times. In these references, that he may really "begin at the beginning," or as near to it as possible, he introduces us, as a matter of course, to Hippocrates, but declines making us known to Æsculapius or his sons. He then passes in review before us, like the descendants of Banquo before the eyes of Macbeth, the shadowy forms of Erasistratus, Herophilus, Aretæus, and Celsus; Galen, Sennertus, Vogel, Van Helmont, De Haen, Pringle, Lind, Fordyce, Clutterbuck, and others.

We said that our author invoked all these worthies to aid him in discovering the nature of fever, and framing for it a definition. In this statement however we were mistaken. The Professor summoned those writers before him, to charge them with error, and show them that their views of fever were incorrect, and that he himself was the oracle to instruct them. And the precious revelation he makes to them is as follows:

"Fever I define to be, an affection of the whole system"! (Page 57.) To convince them that this revelation is genuine, and to induce them and all the living world to believe it emanated from himself, and was new to everbody else, he reveals a further fact, in the following words: "*My* definition, that fever is a disturbance of all the functions is adopted by Dr. Wright, Professor Jackson of Boston, and by Dr. Potter of Baltimore; and indeed the same is now adopted substantially in the Philadelphia school."!

Such is Professor Hosack's assumption of originality, as relates to the essence or definition of fever. And we regret that he made it; because it is groundless. That definition, whether right or wrong—a true revelation or a false one—belonged no more to him, than it does to ourselves. Professor Rush announced it *forty years* ago. Nor are we willing to

vouch that it was original with him. We suspect that it was not. He often however in his lectures thus expressed himself "Gentlemen, fever is a *disease of the whole system.*" And in passing from one form of fever to another, he frequently, if not uniformly remarked:—"This also, gentlemen, is a disease of the whole system."

But no matter who is the author of this so called definition of fever; and no matter who adopts it. Two objections lie against it, either of which is fatal to it. It is not a *definition* of any form of fever, because it communicates no *definite idea* of any sort of such affection—no idea, we mean, by which the complaint can be known and distinguished, by those who have received no knowledge of it from any other source. And an objection still more formidable is, that the definition *is not true.* There are forms and degrees of genuine fever, in which *all* the functions of the system are not deranged. This is true as respects the *external senses.* They are very important functions; and yet in various forms and degrees of fever they are as sound as they are in health. Indeed the cases of fever, in which *all* the external senses are "disturbed" *from the beginning*, are but few. In an *advanced stage* of very severe cases of cephalic fever, all the external senses often suffer; but rarely from the *commencement* of them. Were we inclined to dwell on this subject, we might say the same of the intellectual and moral faculties, whose soundness depends on the soundness of the brain. In many cases of fever they also are not disturbed—neither strengthened, debilitated nor perverted.

Our author then, we repeat, in his attempt to define fever has not been successful. Nor has any other writer. Fever has never been defined, notwithstanding the numerous efforts that have been made to that effect, by the ablest and most

eminent members of the profession. Worse still; it never can be defined; because, in different stages, different types, and different cases, it is widely different from itself—and *still is fever.* A *correct* definition of it, therefore, in one form, or one stage, would be an *incorrect* one in another. Hence, we say, a full and satisfactory definition of fever, in the abstract, can never be framed. The only practicable way to give a true picture of it is to delineate its several stages or elements in succession, and unite them as a whole—and the work will then be done—as well at least as it *can* be done.

Should any of the friends of our author, or any of those who concur with him in opinion, and are anxious to promote the circulation of his "Lectures," take exception at the freedom of our strictures on them, and the unceremoniousness of our objections to their doctrines, our reply to them is brief. We believe our objections and strictures to be true, and that it is our duty to offer them. Nor is this all. Professor Hosack in person, as his "Lectures" testify, has set us the example. He was himself proverbially a *fault-finder.* He rarely referred to a *contemporary* writer or teacher, but to state objections to some of his doctrines. It was chiefly on the opinions of the distinguished dead alone, especially of those who died centuries ago, that he did not make war, but quoted them as authority.

Lecture VI. on "Fevers in General," is a singular production. Though it contains a large amount of matter, not in itself uninteresting or useless, yet that matter is thrown together in a manner so irregular, loose and disjointed, as to present to the reader no definite end or aim, much less to establish any given point. In this Lecture moreover the Professor strikingly manifests and establishes the fact, that he is, in a high degree, a writer of other times, by his con-

tinuing to be a believer in antiquated and *obsolete notions.* Of this adherence by him to cast-off errors, either from obstinacy, or a want of better information, the following is an instance, the existence of which we would not have credited, had we not found it in his book.

"As before observed, it is the effect of respiration to increase the heat of the body—*the lungs are the fire-place*"!—In 1788, not long after the discovery of *latent heat*, this notion might have been tolerated; because it would have been in accordance with the philosophy of the day. But in 1838 (the date of the Lecture) it is equally in opposition to existing philosophy and established truth, and therefore unpardonable. Respiration does *not* increase the heat of the body; and the lungs are no more the fire-place, than the stomach or the liver. The notion bespeaks a radical defect in the Professor's physiology.

But from matters merely doctrinal, we shall pass to those that are strictly practical. And we regret to observe, that here also our report of the Lectures will not be commendatory—especially as relates to the treatment of diseases in the Valley of the West. We shall select for our purpose, the practice recommended by Professor Hosack in such forms of disease as are most prevalent in that Valley. Fever, in some of its modifications, is a disease of this description. That the Professor's mode of treating this complaint therefore may be seen, examined, and understood as it is, without abridgement, change or misrepresentation, we shall lay before the reader his nineteenth "Lecture" entire, whose heading is,

"THE GENERAL TREATMENT OF FEVER—TREATMENT OF THE FIRST STAGE."

"THE treatment of fever now falls under our consideration; and, as in describing the phenomena of fever we divided it into its different stages, we shall observe the same order in

speaking of its treatment, pointing out, as far as may be practicable, the remedies proper to be employed in the different stages of fever. At this time I propose, therefore, to point out the general indications of cure, the general means of fulfilling those indications, and the principles upon which those means are to be employed.

"In the treatment of the first stage, constituting the invasion of fever, the first indication, as we have remarked, agreeably to our view of the proximate cause, is to counteract the irritation, which appears more especially in the nervous system. Dr. Cullen's indication, agreeably to his view of the proximate cause of fever, ought to be to counteract his supposed debility, and accordingly, bark and wine, with other tonics and stimuli, would be the best remedies; but neither his doctrine, nor the treatment it leads to, I trust, will be contended for. The irritation we have noticed as existing in the first stage, or rather as constituting the first stage, shows itself in various ways. The symptoms which usher in the first stage of fever may be divided into three classes.

"The first class we may denominate the ordinary attack of fever, exhibiting itself perhaps by a slight chill and some sense of coldness, but without much pain or any other symptoms, local or general.

"In the second class, we find the patient attacked with severe pain, showing itself in the head, back, or limbs, or in all at the same time, with great general soreness and stricture of the surface—a distressing sense of coldness amounting to rigors or perhaps convulsions. These rigors are sometimes fatal, especially to aged persons; but Dr. Cullen remarks, that rigors taking place, the patient is not carried off by that paroxysm. This is not always so. I recollect the case of a gentleman who was thus attacked with rigors upon the invasion of a paroxysm followed by stupor, and which proved fatal to him during the very paroxysm—the irritation was such that they ended in an apoplexy; such was the crowded state of the vessels of the brain. He was subject to intermittents, and they usually affected his head. He had been exposed to the cause of it; it occurred during the season of its prevalence, and from the rigors and general symptoms which ushered it in, the character of the disease was not to be doubted. This event too, I believe, is of much more frequent occurrence than is usually supposed; it might be called the apoplectic state of intermittents.

"The third class of symptoms we find still more formidable and alarming, viz. delirium or mania; for all fevers, as we have seen is the case with yellow fever and the plague, are

not ushered in by the ordinary chill that usually announces the paroxysm of an intermittent.

"In the ordinary attack of fever, the heat generating power of the system is sufficient to counteract the temporary effects of the irritation produced upon the exteme vessels, for the tone of the system is not impaired, nor are any of the vital organs particularly oppressed. In that case, the constitution being good, and the body not more than ordinarily cold, the common practice is generally sufficient, viz. to place the patient comfortably warm in bed, and to administer to him some warm tepid drinks, as various teas or toast water.* Weak mint or catmint tea, when they can easily be procured, are preferable drinks when the stomach is disturbed during the invasion of fever. They should, however, be taken of moderate strength, as they may otherwise, by the essential oil they contain, increase the excitement of the system; the quantity too should be regulated by moderation, for we may excite the system by the quantity as well as the quality of the drinks we employ. I frequently also direct the patient previous to his getting into bed, if his extremities be cool, to bathe the feet in tepid water. I then give him a moderate sudorific anodyne, composed of ℥ss. of the spiritus mindereri, with from fifteen to twenty-five drops of laudanum. If the stomach is irritable, administer the dose in mint water.

"It is important, however, to remember that the hot stage of fever is very soon to succeed. Keep this always in view in all your prescriptions. On this account, too, observe the temperature of the water in which the patient immerses his feet, of the drinks he employs, and the temperature of the air of the room. With the same view the quantity of his bed clothing should also be regulated by the physician, and all stimuli, such as light, noise, company, business, should be withdrawn or guarded against at this time, in order to prevent or moderate the excitement which is soon to succeed.

"But one of the most important and efficacious class of remedies which can be administered at the invasion of fever, (especially the remittent and continued forms of fever,) when the situation of the patient is such as to call for or to justify

*Let me here remark, once for all, that the proper mode of making toast or bread water, is by infusing the slice of bread, when well browned, in boiling water, but not in cold water, as it usually is done; for the object is to give the drink moderately warm, and to render it grateful to the nauseated stomach; to do so, this is the only proper mode of preparing this drink, and thus prepared, it is one of the most palatable and grateful drinks to patients in general that can be directed in an irritable stomach, at the same time that it is readily obtained.

their use, is *emetics.* Armstrong, a late writer, p. 99, observes that 'in the beginning of almost all febrile complaints, emetics will generally be found very beneficial, though much neglected now-adays by many practitioners.' The emetic having operated, I usually direct some Indian gruel, either sweetened with brown sugar, or seasoned with a small quantity of common salt, to be taken afterwards, with the view to obtain some effect from it upon the bowels; in some instances, an hour or two after the emetic has ceased to operate, I add the sulphate of magnesia, or the sulphate of soda, or Rochelle salts to the gruel, or solicit an evacuation from the bowels by an enema, or a dose of Seidlitz powder.

"In the first stage, where it occurs under ordinary circumstances without those peculiar distressing impressions upon the nervous system; without the inordinate fulness of the blood-vessels producing delirium, stupor, or mania; where the degree of cold is not excessive; where the patient is neither too plethoric nor of too feeble a habit, nor too advanced in life, when the circulation of the brain is less active, and the vessels of the brain are perhaps loaded by the venous plethora; when these circumstances forbid their use, emetics, and these given so as to produce full vomiting, may be directed with the best effects. In some instances, too, the breath of the patient is offensive, the tongue is foul and loaded with sordes; he complains of a disagreeable taste in his mouth; in such cases, whether in the adult or child, they are peculiarly proper, especially if the fever may have habitually returned for several days, or there is reason to suspsct some additional source of irritation about the stomach or biliary organs, in such instances they cannot be too promptly administered. But not so in stupor or feeble old age, nor in yellow fever, are they to be administered.

"What are the effects of emetics, that they are so generally serviceable in fever?

"In the first place they empty the stomach of its contents; not only of indigestible food, but oftentimes of an inordinate quantity of mucus and other materials which may be accumulated in that organ. They promote the secretions of the stomach, and the adjacent viscera, particularly the liver. They increase the serous discharge of the intestines, and by the relaxing and antipasmodic effects on the whole system, they restore the perspiration, and unlock most of the secretions and excretions of the body. The emetic I prefer in such cases, and with the view to these general febrifuge effects, is composed of ipecac. and antim. as follows: Ipecac. x. gr. to xv. gr., com-

bined with tart. antimony, ij. gr., directing the patient to take little or no drink until it has operated; to be repeated, if necessary, in half an hour, or an hour, if it has begun to operate.

"For the removal of the second mode of attack, where the patient suffers much more pain, a great sense of soreness, or is affected by rigors or convulsions, such remedies are indicated as will most immediately diminish irritation, and particularly such remedies as are best calculated to allay spasm. Opiates, the warm bath, and tepid drinks must be had recourse to, and are among the best remedies we can employ for this purpose. Opiates are useful by diminishing sense and motion.

"To children 1 administer ten drops of laudanum every half hour, in conjunction with the tepid bath. In the adult thirty drops with ʒss. of the sp. mind. may be repeated every half hour, until the nervous system be composed. If the stomach be much disturbed, warm mint water will be the best vehicle for the laudanum. A general warm bath, as soon as it can be procured, ought also in such cases to be employed. In the meantime, however, the limbs may be wrapped up in fomentations composed of vinegar and water, one-third or one-fourth vinegar, and two or three parts water, but not spirituous fomentations; as before, paying attention to the temperature at which they are applied, lest more mischief than good arise from the manner of their application. It is no less important too, in applying them as far as possible to prevent the clothes of the patient, and the bed and bedding from becoming wet with the application made use of, as the patient afterwards is rendered liable to a chill from the cold and moisture surrounding him. For this purpose then, be careful to introduce one fold of the blanket between the legs of the patient and the bed he lies on. Let his limbs then be surrounded by the wet flannels with which the fomentation is applied, and another fold of the blanket that is beneath him turned, so as also to protect the clothing that is above him from becoming wet and uncomfortable. Another ready and common mode of applying steam or vapour to the body, and one to which the elder Dr. Bard was attached, is by means of bricks heated to a proper temperature. These should be surrounded first by a flannel cloth wet with a mixture of vinegar and water, and in order to prevent the bed from being made wet and uncomfortable, this should be again surrounded with another piece of dry flannel. Two of these bricks thus prepared and laid to the extremities, or at the sides of the patient, will be found useful both in restoring warmth, and inducing that greatest febrifuge of all, perspiration. And

we may observe, that the temperature of the body is much more reduced by perspiration than augmented by the heat that is thus applied in conjuction with moisture or steam. So, in like manner, the effects of the warm bath in producing a large discharge from the surface, more than counteracts all the heat that has been applied in the bath. But as I have before remarked, you cannot, as a general rule, be too particular in your directions relative to the temperature of all the internal or external applications that may be necessary in the treatment of fever at this stage.

"But again: in old men much affected by cold and rigor, their caloric carried off, the patients feeble and not in condition readily to restore the lost heat, and the heat perhaps abstracted by long previous exposure to cold; in that case stimuli may be administered, and are indicated. But even then they should be directed with some caution. *Respice finem* should still be our motto. Cordials and aromatics are improper in most cases of the invasion of fever; but in those which I have just mentioned, in which the system is feeble, the action in the extreme vessels can only be restored by stimuli, administered both internally and externally. Warm and stimulating drinks, such as gin or brandy toddy, spiced wine, or wine whey, should now be freely administered, until the temperature of the patient be restored. With the same view, other stimulants may be prescribed; as a tea-spoonful of compound spirits of lavender, frequently repeated, or twenty or thirty drops of the vinous spirit of ammonia, or of the aq. ammoniæ.

"External applications should also be directed, as a hot bath, made still more exciting by the addition of rum, or the aq. ammon. occasionally introduced while the patient is immersed in the water. Stimulant spirituous fomentations—stimulant cataplasms, prepared by dipping a slice of toasted bread in hot vinegar, and covering the same with mustard, may be applied to the soles of the feet, or other sensible parts of the body. The room too should be rendered warm, the patient covered with rather more than the ordinary quantity of clothing, with the view to accumulate heat about his person. But remember, all these stimuli are again gradually to be withdrawn, in proportion as the excitement of the system becomes restored, or may be increased; otherwise these very means of restoring the heat and circulation will be the means of exciting a high and dangerous degree of febrile action.

"But when the third mode of the invasion of fever comes on with delirium, stupor, or mania, a method of treatment is

called for totally different from that used in the ordinary attack, or in that accompanied with great coldness, severe pain, rigors, or convulsions. In this third mode of invasion, no cold stage is perceptible; it at once comes on with stupor, delirium, or the ravings of mania. In that case, if the pulse be full and slow, or hard and frequent, and the habit of body plethoric, as is frequently the case even in advanced life, we must have recourse to depletion. Not opium in this case; not, however, for the reason that perhaps some of you may give, because it proves a direct stimulant to the system; no, but because it retards the action in the smaller vessels, and thereby crowds the larger. Do you want proof of this? You have occular demonstration of it in the experiments made by Dr. Monro upon frogs. You also have it in the experiments made by Dr. Bard upon himself—see his thesis. But if it be not the property of a sedative to diminish sense and motion, then opium may be called a stimulant; and if it be the property of the stimulant to excite sense and motion, then opium is assuredly sedative.

"But to return. Evacuations by the lancet, and perhaps by cupping, or by dividing the temporal artery, if the symptoms be urgent—by cathartics, blisters, and sudorifics, (such as cream of tartar, sp. mind., &c.) to diminish the quantity of circulating fluids, which especially oppress or iritate the brain, must be employed. The vital functions being thus attacked, the most active measures become necessary.

"In the 188th No. of the Medical and Physical Journal, this practice is recommended as a new practice! and announced as a great discovery; and lately the same practice of blood-letting has been recommended in the treatment of typhus by Walsh of Edinburgh, and by Dr. Armstrong in his late work on the same subject, as a novel treatment. Venesection in intermittents, and in typhus, is a doctrine which has been well understood and practised in this country for many years, and taught in the University of Pennsylvania by Dr. Rush, and in this college. I also taught it in the very first lessons I ever delivered on the treatment of fever. All light does not proceed from the east. I had almost said, that Dr. Rush alone has done more towards introducing an efficient practice in the treatment of diseases, than all his cotemporaries in Europe or any other parts of the world collectively have done. But caution is no less necessary in discriminating between those cases where such active treatment is called for, and those where it is inadmissible; we otherwise may extinguish life instantaneously, for fever in this invasion is some-

times immediately fatal. But again; do not suffer the life of your patient to be sacrificed in this apoplectic form of fever for the want of the lancet, because forsooth it is symptomatic of the invasion of an intermittent, in which blood-letting in general is not advisable or necessary. Venesection, in the cold stage of an intermittent, has been lately recommended in the Edinburgh Journal, as if a new practice. It has been long since well understood in the United States. Be cautious, too, not to commit yourselves by denominating this form of fever apoplexy, for your patient in a few hours may be relieved, and the want of discrimination in you be censured for not foreseeing this result.

"Purges, in like manner, are generally improper in the first or cold stage of fever. So also, are such drinks as cream of tartar and tamarinds, &c., but they are not improper in the present state of stupor or phrenitis; they are now indicated. And recollect, too, that cathartics are not only indicated for the purpose of diminishing the fluids of the system, but also to transfer excitement from the brain, and thereby also to lessen the quantity of fluids there determined by such irritation. With this view, saline cathartics, or stimulant cathartics, composed of jalap and calomel, are to be preferred. I cannot, however, too severely reprobate the use of the small doses of calomel, usually and promiscuously prescribed under the appellation of fever powders; they are indeed fever powders, for they most effectually continue fever. Calomel, as a cathartic, in the beginning of fevers, is among the best that can be employed, and occasionally too, may be administered in the progress of the fever. It excites a degree of nausea, sometimes vomiting; unloads the biliary organs, dislodges scybala, invites a large secretion into the intestines; and afterwards, in unison with antimony, has a sensible effect upon the surface, as well as the excretory organs in general. Such purgatives as excite the whole system, as does colocynth, gamboge, &c., are to be avoided. This is where cathartics are indicated to empty the intestines, and thereby to prevent the absorption of the contents of the belly, which, as a means of repletion, would aggravate the disease, while by their qality they would add to the malignancy of such fever. Castor oil is frequently prescribed as a domestic purge in the beginning of fevers; as a means of emptying the intestinal tube it is effectual, but not so in its operation upon the liver, or the excretions of the general system. Enemata are also indicated, as more immediate in their operation than cathartic medicines.

"In the treatment of fever it frequently becomes necessary to combine all your forces, and as nearly as possible at the same time, and not in the successive and inefficient manner that we see remedies often directed. Such procedure is similar to that of a commander who suffers his army to be cut off, regiment by regiment; whereas, by one general engagement he might have been sure of victory, and that with a small loss of his men. Thus in fevers the powers of life are gradually destroyed by the continuance of the disease, and the many repeated, feeble and insufficient attempts in succession to bring about a cure—whereas, by summoning all your resources at the same time, you put the enemy to flight, and prevent that loss of strength that otherwise would be the result. We should not wait in such cases for the slow operation of cathartics, and which are rendered still more slow by the influence of the fever upon the system, but immediately administer the domestic injection, by which you will remove a great additional source of irritation from the bowels. Take oil, molasses, or honey; common salt, aa ℥ss.; water ℔i. M.; or equal parts of milk and water; or soft soap, ℥ii., water ℔j.; or which is still more active, castor oil, ℥s., glaubersalts, ℥s., aq. pluvial. ℔i. M.

"Blisters are another means of diverting the excitement from the brain to the surface of the body, not by the mere discharge of fluids they occasion, but by the excitement they produce upon the surface, or to the part to which they are applied. Such, too, is the opinion of Dr. Jackson, that they produce their good effects by the local affection they create.* Armstrong, too, highly approves of blisters, as among the means of breaking up febrile action. But even the derivation of the fluids in these cases is useful, by abstracting them from the brain to which they tend, and the sooner blisters are applied the better. They should be applied behind the ears, between the shoulders, to the wrists, to the ankles, or to the præcordia; that is, to the most sensible parts of the body, for the very purpose of creating new and powerful excitement.

Sudorifics also constitute an important class of remedies in this stage and state of fever—that is, such sudorifics as at the same time that they relax the surface of the body, also diminish excitement in general. The sp. mindereri—aq. acetat amm., may be advantageously combined with a portion of tart. antimony. Antimony, in some of its forms, especially tartarized antimony, the tartrite of antimony and potass. gr.

* Jackson on Fevers, 224.

ij. in eight doses, with cream of tartar, ʒij., or in sweetened water alone. Vin. antimoniale, xxx. gtt. to ʒi., the pulvis antimonialis, that is, the antim. calc. phosph. gr. iv. to gr. vi. every two hours, in syrup. The real James' powder, from gr. x. to gr. xv. or ℈i. every two or three hours, or combined with calomel, from gr. iij. to gr. vi. of each combined, repeated every three hours. These diaphoretic or sudorific medicines should also be aided in their operation by suitable drinks. When the patient is in the use of antimonial medicines, his drink should be some of the following:—toast water, catmint tea, (nepeta cataria,) balm tea, (melissa officinalis,) common tea, (thea viridis,) bran tea, rice or barley water. But when the patient is not in the use of antimonial medicines, he may make use of other drinks, which he will find both more grateful and useful during the heat and thirst of fever, as lemonade, apple water, tamarind water, currant jelly and water, molasses and water with the addition of a small quantity of vinegar; this is commonly called switchell by our eastern brethren, and a most excellent drink it is too in fevers, unless the bowels may be too freely opened. It is frequently directed by me in the hospital. Vinegar whey, too, is another valuable drink in this excited state of the system; but these acid drinks, taken during the use of antimonial medicines, are frequently attended with pain in the bowels and in some instances they render those medicines dangerously active. They should give place, therefore, to some of those before enumerated."

Presuming that the western student of medicine, and the western practitioner of good intellect and some year's experience, have carefully read and studied the foregoing "Lecture," we ask the former what he has learnt from it, of a decided, pointed, and definite character? and the latter, what he has met with in it, in accordance with the practice he has found it necessary himself to pursue? And we feel no apprehension, that the reply from either will materially conflict with the sentiments respecting the production, which we have ourselves so openly expressed in the preceding pages. On the contrary we are persuaded it will harmonize with them. We venture to say, that any intelligent, educated, and observing physician, twenty-five years of age, and of

three years standing as a practitioner, in the Mississippi Valley, could instruct Professor Hosack, were he now living, how to *treat our prevailing fevers*, of every description, better—vastly better, than he instructed his class respecting them, by delivering his "Lectures" to them; or than his Reverend Editor will instruct the American faculty, by the publication of those "Lectures." Yet has Professor Chapman announced to the world that he "considers the *practical part* (of the "Lectures") *sound;* and that it corresponds very much with his own views." We do not pronounce the practice thus concurrently recommended by Professors Hosack and Chapman unsound, as relates to the complaints of the Eastern States. Far otherwise. On that point it would be unbecoming in us to deliver our opinion. But, as respects the complaints of the Western States, we do so pronounce it, because we *know* it to be, unsound. To teach it therefore to pupils, who intend to pursue their profession in the West and South, is to mislead and injure them. Worse still; it is to put the lives of their patients in danger.

There are also contained in the Lectures before us certain pathological doctrines, which we deem not only groundless in themselves, but, as far as their influence may extend, pernicious in their consequences. Prominent in this respect are those which relate to *contagion* and *humoralism*—especially that form of humoralism, of which a supposed putrescent condition of the human fluids during life, constitutes an element. These doctrines, connected with a few other points of interest, will probably be made the basis, at a future period, of another critique on the work we are considering. Meantime we say distinctly now, that we regard the unfounded notions respecting contagion and putresency, contended for by the late Professor Hosack and a *few* other physicians, to be, in their practical effects, among the most

mischievous that have been broached by medical writers. And we further say, that there is no physician, whether he be a Professor or not, whose sphere of practice has been exclusively east of the Alleghany mountains, who is competent either to deliver lectures, or to write a book, containing correct instructions how to treat the complaints of the West. Lectures and books, containing such instructions, can be prepared only by physicians who have a *practical* acquaintance with such complaints. If there be *positive maxims* in medical science, this is one of them. And it has been long a matter of regret and surprise to us, that due action has not been taken on it by western physicians.

ART. V.—*On Scarlatina*, in a Letter addressed to his Son.—By WILLIAM INGALLS, M.D., &c. &c. Second edition.

DR. INGALLS details three cases of Scarlatina, in his letter, with the mode of treatment which, during a long experience, he has found most successful. Remarking on the various remedies employed, we were surprised to find Dr. I. declaring that, in the treatment of Scarlatina, he was opposed to the detraction of blood by the lancet or leeches. We have been inclined to regard bleeding as one of the most potent means of subduing this formidable complaint—as indispensable in the highly inflammatory grades of the disease. Dr. I. remarks: "In the whole course of my practice in Scarlatina, *I have never employed blood-letting*, either general or local; and I do not recollect a single instance, in which I have had reason to regret the omission." He adds—"It may be proper to state, my practice has been chiefly within the city of Boston. As

the situation of a place, and of course, its climate and soil, the customs and manners of its inhabitants, may have great influence in varying the type of acute diseases, a difference in the mode of treatment may not only be proper, but required." Ptyalism occurred in two of his cases, which could not be traced to the action of mercury. He remarks:

"The ptyalism began to decline in about six days; to *me*, in this case, the cause of the complaint is unknown. Cases of idiopathic ptyalism have occasionally come uder my care from the commencement of my practice; some having all the characters of a mercurial salivation. This circumstance has led me to conjecture it may have been the result of mercury administered at a former period, and having lain dormant, until some change in the system have had the effect of bringing into action its properties of ulcerating the gums and mucous membrane of the cheeks and tongue, and consequently increasing the secretion of saliva. On this subject, however, I have formed no definite opinion.

"In this case of your sister, and also in that of your brother, an account of which follows it, I would remark, the ptyalism was not attended with the swelling and ulceration of the tongue and gums, nor the offensive fœtor peculiar to mercurial salivation."

ART. VI.—*Report of Experiments on the Action of the Heart.* By C. W. PENNOCK, M.D., &c. and E. M. MOORE, M.D. &c.

THE experiments detailed in this Report, appear to have been made with care, and under circumstances favorable to accuracy. The conclusions from them coincide very nearly with those of the British physiologists—the correctness of whose results, when compared with those of the French, the authors of the Report believe, is to be attributed to the use of large animals. The following are some of the conclusions:

"1st. The impulse is synchronous with, and caused by, the

ventricular contraction,—and when felt externally, arises from the striking of the apex of the heart against the thorax.

" 2d. The expulsion of the blood from the ventricles is effected by an approximation of the sides of the heart only, and not by a contraction of the apex towards the base; during the systole the heart performs a spiral movement, and becomes elongated. (Experiments 6th, 10th, and 11th.)

" 3d. The ventricle contracts and the auricle dilates at the same time, occupying about one-half of the whole time required for contraction, diastole, and repose. Immediately at the termination of the systole of the ventricle, its diastole succeeds, occupying about one-fourth of the whole time, synchronous with which the auricle diminishes, by emptying a portion of its blood in the ventricle, unaccompanied with muscular contraction. The remaining fourth is devoted to the repose of the ventricles, near the termination of which the auricle contracts actively, with a short, quick motion, thus distending the ventricles with an additional quantity of blood: this motion is propagated immediately to the ventricles, and their systole takes place, rendering their contractions almost continuous. (Experiments 15 and 16.)

" 4th. From the termination of their diastole to the commencement of their systole, the ventricles are in a state of perfect repose, their cavities remaining full, but not distended, while those of the auricles are partially so, during the whole time.

" 5th. The sounds are produced by the motions of the heart or its contents, and not by striking against the thorax, as proved in all the experiments; being much louder when the stethoscope was applied directly to the heart, than when to the chest, or with the lungs interposed.

" 6th. The sounds are more distinct when the muscle is thin, and contracts quickly. Hence, the clear, flapping character of the first sound over the right ventricle, as compared with the left.

" 7th. The first sound, the impulse, and the ventricular systole, are synchronous. This sound may be a combination of that caused by the contraction of the auricles, the flapping of the auriculo-ventricular valves, the rush of blood from the ventricles, and the sound of muscular contraction. From experiments 3d, 4th, 6th, and 10th, when the heart was removed from the body, the ventricles cut open and emptied of their contents, the auriculo-ventricular valves elevated, and a sound, resembling the first, still heard, it may be chiefly attributed to the muscular contraction. That these valves aid but slightly

in its production, may also be inferred from experiment 16.

"8th. The second sound is caused exclusively by the closure of the semi-lunar valves from the reaction of the arterial columns of blood upon them, in its tendency to regurgitate through the aortic and pulmonary orifices. This is proved by the greater intensity of this sound over the aorta than elsewhere, the blood having a strong tendency to return through the valvular opening; by the greater feebleness of the sound over the pulmonary artery, which is short, and soon distributes its blood through the lungs, thus producing but slight impulse upon the valves in the attempt to regurgitate; by the disappearance of the sound, when the heart becomes congested and contracts feebly; and, finally, on account of its entire extinction when the valve of the aorta was elevated.

"9th. The second sound is synchronous with the diastole of the ventricle."

Selections from American and Foreign Journals.

On the Treatment of Lateral Curvatures of the Spine, by the Subcutaneous Division of the Muscles of the Back and the Vertebral Column. Abstract of a Letter addressed to the Academy of Sciences. By JULES GUERIN, M.D.

I HAVE the honor to communicate to the Academy, the first result of a new operation, which I have already practiced twelve times successfully in subjects affected with lateral curvature of the spine. This operation consists in the section of certain muscles of the back and vertebral column. The muscles which I have at present divided are the trapezius, the rhomboideus, the levator anguli scapulæ, the sacro-lumbalis, longissimus dorsi, and the semi-spinalis.

The greater number of lateral distortions of the spine are the result of active muscular contraction, and their anatomical varieties are the result of this contraction, variously exhibited in the muscles of the spine and back. The active treatment of this class of deformities must, therefore, consist in the subcutaneous section of the muscles, to the shortening of which each deformity is due. The following are some details of the applications which I have made of this mode of treatment:

I have applied it to subjects of both sexes and of different ages: the youngest was thirteen, the oldest thirty-two years old. All the cases were deformed in the second or third degree, with proportionate twisting of the column, and gibbosity. In some a single division of the retracted muscles sufficed; in others, two or three had to be made. In all I obtained, immediately after the operation, a marked degree of straightening of the column; and in a young man of twenty-one, whose deformity had been subjected for eighteen months to mechanical treatment, I obtained by dividing the corresponding longissimus dorsi and semi-spinalis, an immediate removal of the whole deviation. In other subjects I have been able to pursue, with a constant success, the treatment, by mechanical means. In none of the twelve operations have I met with the least accident; there has been no hemorrhage; but little pain; no fever; and in every case but

one, immediate union of the wound has taken place, without suppuration. I may add that though delicate, this operation may be performed almost as easily as the similar one in the neck or foot.—*Gazette Medicale. June* 29, 1839.

Singular Case of a Woman delivered of Five Children.

Giuseppa Califani, of Naples, at the age of fourteen years and three months, was married to a man aged twenty-seven, by whom she had ten children at eight accouchements; at the fifth and sixth producing twins. She lived with her husband ten years, and remained a widow three years after his death; she then took a second husband, whose age was about twenty-nine. After two regular accouchements upon her third pregnancy she became enormously large; so that, at seven months she appeared to be at the termination of her natural period. She was taken, however, at seven months, with labor-pains, and brought forth, successively, and by natural presentation, five living children, all of whom were baptized. The mother did not suffer anything extraordinary. Four of these children were females, and one male. The male infant was delivered first, and after a few minutes one female; then after a cessation of fifteen minutes' interval between each, the other three followed. The infants much resembled each other, and were of a regular form and well grown, and very nearly of the ordinary size of a seven months' fœtus; each weighed about 3½lbs., and measured in length a French foot. The insertion of the umbilical cord was about four lines lower down than ordinarily. The placentas with their membranes were four instead of five; and each had its proper umbilical cord, except the fourth, which contained two in one large sac. The fœtus, with their membranes, placenta, and umbilical cords, are preserved in the Royal Anatomical Museum of the University of Naples.—*Bulletine delle Scinze Mediche.*

Singular case of Malformation.

On the 20th March of this year (1839), at Schneidemuhl, a stout woman who had before borne five living and healthy children, was delivered of a remarkably stout female infant, presenting the following defective formation. The heart, and, under it, the stomach, both organs apparently separated by a partition, lie outside of the thoracic and abdominal cavities, in a sack of skin, nearly transparent. The protrusion is

through a deficiency of the lower third of the sternum and upper part of the wall of the abdomen, as far as midway between the pit of the stomach and navel. The fissure is altogether 5½ inches long, and 2¼ inches broad, and is situate almost in the middle line of the body. The child is living, sucks, and is otherwise well. The prolapsed parts are protected by an appropriate bandage.—*Med. Zeitung. April* 17, 1839.

Galvanic Obstetric Forceps. By Prof. Kilian, of Bonn.

Desirous of ascertaining how forceps, the blades of which were made of different metals, would affect the uterus in tardy labors, Professor Kilian caused such a pair to be manufactured. An opportunity soon occurred for testing its efficacy. Labor was proceeding slowly from deficient action of the uterus, and for two hours and a half the head had remained in the same spot. The forceps were applied, and, as soon as the two blades were joined, the uterus was felt to contract powerfully, but not in such a manner as to assist in the expulsion of the child.

[Was not this mere accident?]—*Medicinische Zeitung.* No. xii. 1839.

On Hydrated Peroxyde of Iron as an Antidote to Arsenic. By a Commission of the Academy of Medicine of Paris.

Dogs were first destroyed by arsenic, to determine the time in which that poison proves fatal when its action is not interfered with, and to obtain a standard by which the beneficial effects of the antidote might be more nearly estimated. Other dogs were killed by ligature of the œsophagus to determine the influence which that necessary operation would have in their destruction. Four different oxides of iron were then used with different dogs to whom arsenic had been given. A moist protoxyde, containing nineteen per cent. of anhydrous peroxyde, and a black oxide containing seven per cent. were entirely inefficacious; the dogs died as soon as they would if no means had been used to save them. The moist hydrated peroxyde, and the common dry hydrated peroxyde of iron (the subcarbonate of iron of former pharmacopœiæ, and ferri-sesqui-oxydum of the present,) both produced more important results. Ten animals poisoned with arsenic were treated with the first. In the first experiments large doses (half a drachm) of arsenic were given,

and comparatively small quantities (four, six or eight ounces,) of the magma of peroxyde of iron; yet all the animals lived many hours longer than when the action of the arsenic was left uncontrolled. In the subsequent experiments, twelve grains of arsenic were given, and from eight to sixteen ounces of the antidote; and all the dogs thus treated lived as long as the ligature of the œsophagus would permit them.

With the second compound (the subcarbonate of sesquioxyde of iron,) in three experiments, in which four grains of arsenious acid, and three ounces of the antidote were given, the animals, like those last mentioned, lived to the full period which is possible, after tying the œsophagus. The arsenite of peroxyde of iron (the salt which was supposed to be found in the stomach in the preceding cases) was next given to dogs, and evidently acted as a virulent poison. But the apparent anomaly of these cases was proved, by some further experiments, to result from the arsenite of iron, thus administered, being decomposed by the hydrochloric and lactic acids of the gastric secretion, and some uncombined arsenious acid being set free; and this showed that, to counteract the effects of the arsenic it would be necessary to administer the peroxyde of iron in considerable excess, so that every portion of arsenious acid, whether originally existing in the stomach or set free by the decomposition of arsenite of iron, might be completely neutralized.

The results of all these experiments on animals were completely confirmed by the chemical examinations by which M. Guibourt determined the composition and the mutual actions of the substances employed. Thus the first two oxydes that were employed were of no avail against the effects of the arsenic: and from M. Guibourt's chemical researches it was evident that they did not render arsenious acid insoluble. In the physiological experiments the moist hydrated peroxyde of iron neutralised the arsenious acid in the stomach, imperfectly, indeed, when there was a proportionably large quantity of acid, but completely when the proportion of arsenic was small and that of the peroxyde considerable; and in the chemical experiments it appeared that ten parts of the dry peroxyde were necessary to neutralize one of arsenious acid. In the physiological experiments, again, the dry peroxyde completely neutralized the arsenious acid; and in the chemical the same peroxyde reduced to traces scarcely perceptible the precipitate of arsenious acid that could be obtained by Marsh's apparatus.

It is evident then (the Report continues,) that in the circumstances which have been determined, dogs have taken

arsenic sufficient to destroy them in a few hours, and that yet they have lived as long as if only the œsophagus had been tied. The poison, therefore, has had no effect;—the peroxyde of iron, which we have employed is, consequently, a real and efficacious antidote to arsenious acid.

Now, it is demonstrated that we have *disempoisoned* dogs that had taken arsenic; we have determined what doses of hydrated peroxyde of iron are necessary to neutralize fatal quantities of arsenious acid; we have employed with the greatest success, not only the moist peroxyde of iron (always an inconvenient compound), but also the dry hydrated peroxyde, so common in the shops under the name of subcarbonate of iron, and so easy to administer in all imaginable doses, and so little injurious that we can see no necessity to limit the employment that may be made of it in these cases of poisoning. The following then, is the mode of treatment which we should advise to be employed in these cases.

The first duty of the physician is to remove from the stomach the greatest possible quantity of the poison by vomiting. For this purpose watery drinks are improper; but while waiting for the peroxyde of iron, the doctor should tickle the vula, and administer oil, which will not dissolve the arsenious acid; but above all, as soon as it can be procured, the patient should be gorged with warm water, charged with some ounces of the peroxyde. The water will cause vomiting, and the peroxyde of iron, which is suspended in it, will neutralize the particles of arsenious acid that are dissolved. This means fulfils at once the two chief indications in every case of poisoning. The antidote must be given as soon as possible, and in such a quantity, and for such a time that there can be no reason to suppose a single atom of arsenious acid remains in the stomach. Four ounces of the dry hydrated peroxyde of iron (the subcarbonate of iron of the shops, the ferri-sesquioxydum of the London Pharmacopœiæ,) should be suspended in twenty-four ounces of water, and a good glass of the mixture should be taken every ten minutes. After four ounces are consumed, fresh doses of the same compound should be administered in the same way, and the patient should not be considered out of danger till he has taken at least half an ounce of the peroxyde for each grain of arsenious acid supposed to have remained in the stomach. If, afterwards, symptoms of inflammation should manifest themselves, prompt recourse must be had to antiphlogistics and other appropriate means.

In the short discussion which followed the reading of

the Report, M. Devergie said he thought the conclusion too explicit; that the large quantites of the peroxyde which it was necessary to administer, even when but a small quantity of arsenic had been taken, would always be an obstacle to its use, and that it would be unwise to let the presumed antidote take the place of any of the other means usually resorted to, especially continued vomiting. At the conclusion of the discussion it was agreed to employ the words " antidote" instead of " real and efficacious antidote;" and the Report was then unanimously ordered to be printed.—*Revue Medicale. Mai et Juin*, 1839.—*British and Foreign Med. Rev., July* 1839.

Urinary Diseases.—Proximate Cause of Diabetes.

Derangement of the digestive functions is here unquestionably the head and front of the offence. This derangement too is of a very peculiar kind: the stomach has a disposition to fabricate sugar to a preternatural extent out of the food, particularly the vegetable food, taken into it; for the disease is functional in every part, and is actually *disease* only because the *degree* of a natural process is surpassed—the healthy stomach generates sugar to a limited extent; the stomach of the melituric individual generates sugar in excess. The sugar produced in health is without doubt decomposed in the after-stages of digestion; it does not appear in any of the fluids of the body, nor in any of the secretions save milk, of which it is an element, nor in the feces; in the melituric state the sugar engendered is not decomposed; it enters the circulation. To explain all the rest of the disease,—the fever, and wasting, and excessive secretion of urine, &c., becomes easy after this: there is a substance mingled with the blood which is foreign to its constitution, and which consequently poisons life in its fountain head. The derangement of the kidneys is purely secondary, and is consequent upon its efforts as grand purifier of the system along with the lung, to free the circulating fluid of the cause of all the evil—the sugar. The morbid changes discovered in the kidneys, after death from melituria, have even generally been extremely trifling, they have mostly been such as indicated simple increase of functional activity; and this, in fact, is all that the kidneys can be rightfully charged with,—if their efforts are not much rather beneficent than prejudicial; for my own persuasion is, that without energetic action on their part, the disease would prove far more rapidly fatal than it does.

Treatment.— Dr. Willis remarks—"*Could we discover any means of preventing the stomach from forming sugar, we*

should, I believe, succeed in curing the disease. To this end the efforts of practitioners ought in future, as I imagine, to be directed.

He reprobates large doses of opium, but would employ the remedy in doses of one or two grains.

He naturally lauds the sudatorium. It happens, he says, very rarely indeed that a melituric patient is found who resists this powerful agent, which cause large drops of sweat to start upon the skin where no trace of moisture had been seen for months. The sudatorium has even been held as a complete prophylactic of the disease we are discussing: and it is curious to learn that in Russia, as Dr. Lefevre informs us, where every peasant and artizan makes use of the sudatorium, the disease is unknown. He had himself looked in vain through the records of the principal civil and military hospitals of the Russian empire, for the mention of a single case; and Sir James Wylie had not met with it once among upwards of two millions of soldiers who had passed under his notice as general military inspector. But the sudatorium, though seemingly useful, ultimately failed in two cases of Dr. Watson's. Still it is a valuable adjuct to our remedies.

He seems to anticipate much from magnesia.

Proposal to exclude Insalivation.—Dr. Willis, in his laudable anxiety to seize on any remedy for so desperate a disorder, as drowning men are known to catch at straws, proposes to exclude, so far as may be, the action of saliva from the process of digestion. He does this, because the experiments of Leuchs, Schwann, and Mueller have shewn the power possessed by saliva of converting starch into sugar.

Would any thing be gained by administering food to patients affected with melituria, without suffering it to undergo the ordinary preliminary mastication, thereby preventing it from being mingled with saliva? Would food that has not been mixed with saliva, thrive with man for any length of time? I believe it would.

Could vegetable food be administered to melituric patients without prejudice through an œsophagus tube? If the agent in the conversion of fecula into sugar be saliva, as seems certain from the experiments of the distinguished physiologists referred to, we should expect to avoid this conversion by preventing any saliva from reaching the stomach. Chemistry, which has served medicine so efficiently and on so many occasions, ought surely to come to her aid in this instance, and

show as well what will *prevent* as what will *cause* the formation of sugar from starch.

Are Diabetic Patients Intellectual?—It has been remarked, says Dr. Willis, that those who suffer from diabetes are generally individuals of superior intelligence. Hufeland, writing after he had passed something like sixty years in the exercise of his profession, says he never met with a *stupid* man affected with diabetes. From what we have seen of diabetes, it has appeared to us that individuals affected with it have been much like the ordinary run of mortals, some clever and some obtuse. Of this we are certain, that one of the *stupidest* of clod-hoppers died of it under our observation. Hufeland's, we should conceive to be one of those whimsical Continental crotchets, that make plain folks on this side of the water stare.

Mode of giving Alkalies for Lithic Acid Gravel.—Dr. Willis, after considering the caustic alkalies as nauseous, if not acrimonious, (a censure which is perhaps too harsh and indiscriminating,) and approving, of course, of the bicarbonates of potash and soda, observes that it is of great importance to exhibit them in a state of very plentiful dilution. Equal quantities, he says, of some of the natural mineral waters that actually contain but one or less than one part of bicarbonate of soda in 200 of the fluid, are more potent in rendering the urine alkaline than a solution of the same salt in the ratio of one to fifty or sixty. A dram, or at most two drams of the salt in from a pint and a half to three pints of fluid, is the proper proportion; and this quantity may be taken at intervals in the course of the day, with the effect of powerfully increasing the activity of the kidneys, speedily putting an end to the acidulous state of the urine, and either washing out lithic grit and concretions of late formation from the pelvis of the kidney, from the ureter or bladder, or disintegrating and dissolving them, wherever they chance to be arrested. Should the urine not become neutral in the course of a day, the quantity of the alkali may be increased. That the soda may be thus taken for a great length of time with impunity, several remarkable cases prove, though we think that this should not lead to the indiscriminate exhibition and abuse of a valuable medicine. —*Medico-Chirurgical Review, July*, 1839.

A Case of Intus-susceptio, with separation of Five Inches of Intestine followed by complete recovery. By John Fox, Esq., Surgeon, Cerne Abbas.

H. Diment, aged 16, ate some nuts on the 8th September, felt unwell on the 9th, and was seen by Mr. Fox on the 10th. He had pain about the umbilicus, and had had no motion for twenty-four hours. It is unnecessary for us to particularise symptoms or treatment, suffice to say that the case assumed all the characters of intus-susceptio, and resisted all the remedies directed against that disease by Mr. Fox. But on the 16th, it occurred to Mr. F. to give a trial to inflation. He immediately procured a bladder, and secured one end of it to the nozzle of a pair of bellows, and the other end to a common enema pipe, and having introduced the pipe its full length into the rectum, the bellows were set in motion by his pupil, and inflation forcibly but slowly persevered in for many minutes, until the poor boy complained of a disposition to "break wind," and said that his "belly was very tight." The convolutions of the intestines could be seen and felt distinctly, the arch of the colon most so; the tube was now withdrawn, and to Mr. F.'s great surprise and gratification, in about twenty minutes he said he felt as if he should soon have a stool; he was therefore lifted and supported upon the bedpan, when he passed off wind in large quantities, which in a few minutes was followed by a very copious and liqid evacuation, containing, however, a few hard lumps. He continued, after this, to pass flatus and stools, and to improve, until the 22d, when he was decidedly worse. Mr. Fox left him, supposing the case hopeless. On his arrival next morning, he was agreeably disappointed. He found that:—

"My patient's bowels had been very copiously moved, that he had afterwards slept for nearly two hours, and that he expressed himself as feeling in every respect more comfortable; at the same time, however, his nurse told me she 'supposed he would not last many days longer, as a large piece of his bowels had come away with one of his stools.' I immediately examined the stool, removed the substance alluded to, and having carefully washed it, I found that the woman's suspicions were correct, and that it was indeed a portion of one of the intestines, with some of the mesentery still adhering."

The lad recovered perfectly. Mr. Fox naturally regrets that he did not resort to inflation earlier.—*Medico-Chirurgical Review.*

Bleeding in Affections of the Brain.— Is not depletion by bleeding a practice still too general and indiscriminate in affections of the brain, and especially in the different forms of paralysis? I believe that the soundest medical experience will warrant this opinion. The vague conception that all these disorders depend upon some inflammation or pressure, which it is needful to remove, too much pervades and directs the pretice in them: and, if the seizure be one of sudden kind, this method of treatment is often pursued with an urgent and dangerous activity. Little heed is taken of the many cases where the symptoms depend upon irritation alone--or on loss of nervous power—or on deficient circulation of the blood within the brain—or on altered qualities of this blood—or, it may be, on morbid changes in the nervous substance itself. Theory might suggest that, in some of these various cases, the loss of blood leads to mischief.—Experience undoubtedly proves it; and there is cause to believe that this mischief, though abated of late years, is still neither infrequent nor small in amount.

It is certain indeed that there is a state of brain, best perhaps represented to us in its general effects of diminished nervous power, which tends to produce sometimes spasmodic seizures, sometimes delirious or maniacal affections, sometimes palsy of different parts of the body—these effects being in no wise obviated by depletion, but rather increased by all such means; while they are relieved by remedies which tend to excite the energy of the sensorium, and to augment the general power.—*Ib.*

History of the last illness of M. Broussais.

The editor of the Medico-Chirurgical Review, to whom we are indebted for this extract from the French Journal, very plausibly suggests that mischief was done in the case of M. Broussais, carcinomatous in its character, by the artificial dilatation of the gut by means of large bougies, and the application of caustic to its surface, and cautions the young surgeon against the employment of very energetic and hasty measures in the treatment of such diseases.

"It would seem that, after the death of the illustrious medical reformer, various reports were in circulation that his disease had been mismanaged, and that his health and

constitution had suffered more from the medical means that had been employed, than from the severity of the malady itself. M. *Amussat*, his medical attendant, has therefore felt himself called upon to exculpate himself by laying before the medical public a detailed report of his distinguished patient's case, and of the practice which he had pursued in treating it. The case is an instructive one, and the abridged report which we propose to lay before our readers, may probably interest them on more than one account.

For many years M. *Broussais* had been subject occasionally to attacks of severe pain, situated apparently in the pyloric extremity of the stomach, and of diarrhœa recurring at intervals. His appetite and digestion however, were almost uniformly good.

During the last two years or so of his life, he had experienced a gradually-increasing difficulty in the evacuation of the bowels; and at the same time pains at the neck of the bladder, and some degree of dysentery were frequently experienced. In April, 1838, he first consulted his friend, M. *Amussat*, who ascertained by examination, that the anterior wall of the lower part of the rectum was hard, thickened, and knobby, and who, (he tells us himself,) augured unfavorably of the case from his very first visit, although he assured his friend that his disease was only hæmorrhoids, and would be easily cured by means of ligature.

In consequence, however, of M. *Broussais's* objections to any operation, the use only of bougies, for the purpose of dilating the gut was resorted to. Considerable relief was obtained from this practice. A few weeks subsequently, M. *Amussat*, believing that more active measures were necessary, requested that MM. *Breschet* and *Sanson* be called to consult with him upon the case. It was agreed that the same treatment should be continued as hitherto, and that, if the vegetations on the gut increased much in size, recourse should be had to the use of the ligature and of caustic.

In July, the largest one of the tumors or vegetations, which was constantly protruded with a good deal of distress at each evacuation, was tied: it quickly came away, and the patient was considerably relieved in consequence. A few days after this operation, another tumor in every respect like the preceding one, began to cause the same uneasiness; and M. *Amussat* therefore resolved to get rid of it also by ligature.

It would seem, however, that the state of the parts was at this time even more unfavorable than it had been; for it is mentioned in the report;—"the disease had attacked the en-

tire circumference of the bowel, and had reached down to the sphincter: the mucous membrane was observed to be of a shining yellow color and to be much altered in its texture." A ligature was applied to the other tumor: but, as it could not be put high enough up so as to surround its base, M. *Amussat* attempted to destroy the pedicle by squeezing it between the blades of a pair of forceps.

This operation did not cause much uneasiness; but the examination of the gut afterwards was acutely painful. The bougies and tents were again had recouase to.

On the 13th of August, a small vegetation, which was constricted by the sphincter, was excised.

The report continues:—

"The inferior orifice of the rectum had been cleared from all obstructions, and was now readily dilatable. Not so, however, with the diseased portion of the gut. As already stated, the carcinomatous affection had attacked its whole circumference, and the diameter of the passage was so much diminished at the upper part, that the alvine evacuations could scarcely pass through. Enemata produced little or no benefit; and it was only by the use of the bougies and of purgative medicines that the bowels could be relieved."

As the vegetations appeared to be re-forming, M. *Amussat* began at this time to apply lunar-caustic to the inferior constricted part of the gut, and chiefly to its posterior wall, with the view, says he, *de detourner l'irritation qui se propageait a la vessie.* The urinary distress was speedily much relieved: Broussais himself has noted in his diary at this time, *Je n'ai plus de spasme dans la vessie; quand il y a de l'urine, je la rends.*

During the next four weeks, the free application of the caustic* to the diseased surface of the rectum was made four or five times: upon one or two occasions it caused very great pain.

During all this time, the patient seems to have been becoming weaker: his feet began to swell, and little or no progress had been made in widening the passage of the rectum. Indeed it is stated in the report of the case by M. *Amussat*, that on exploring the rectum after the eighth application of the caustic, he found the upper opening of the constricted part so much narrowed that the fæculent matter, collected above the point, could not pass through at all.

After this date, M. *Broussais* went to his country-house

*M. *Amussat* had a large *porte-caustique* made on purpose, as the extent of the diseased surface, which it was necessary to cauterise, was so considerable.

at *Vitry*, expecting that his general health might be improved by the change. He gradually, however, became weaker and weaker, and on the 16th of Nov., after an ineffectual attempt to relieve his bowels, he fell into an apoplectic stupor, and died in a few hours afterwards.

Dissection.—We shall only notice the state of the rectum. The extent of the diseased portion was for about four inches or so from the anus upwards. At one part the surface exhibited a state of pulpy *ramollissement*, resembling, somewhat the appearance of cerebriform degeneration.* The submucous cellular tissue was partially infiltrated with grumous purulent matter.

On the posterior part of the bowel, there was found a rupture of about an inch in extent; but this had taken place when the bowel was drawn away from its attachments.

At no part of the diseased portion was the gut observed to be much constricted: and, judging merely from the *post mortem* state of the parts, one could never have anticipated the degree of obstruction that had been present during life. The portion however of the rectum and of the sigmoid flexure of the colon immediately above or beyond the diseased parts, was found to be much more distended than it usually is.—*Gazette Medicale.*

Origin of Medical Journals.

In the autumn of 1796, Dr. Elihu H. Smith, a man of much refinement and rare acquirements in the profession, conceived the project of a medical periodical. He communicated his plan to his friend Dr. Edward Miller, and they together laid the design before Dr. Samuel L. Mitchell, who had just returned from Europe. They all three united in the enterprise and pursued it with so much vigour, that in August, 1797, the first number of the New York Medical Repository made its appearance. This work, the first of its kind, was warmly received, and ably supported. In its pages are to be found valuable records of our epidemics, and the other diseases of this country. Beginning with the yellow fever of 1793, it contains the complete history of that disease up almost to its last appearance here. It contains the most ample records of the spotted fever, a very fatal disorder that prevailed in the northern and eastern parts of the United States, from about 1807 until after the late war. It contains valuable memoirs

*We must not omit to mention that the putrefaction of the body was already considerably advanced, when the examination took place.

on the typhoid pneumonia, that committed such havoc among our soldiers, and spread to different parts of the country during the years 1813 and '14, and for a short time afterwards. It is rich in medical topography, and in the chemistry of the day, on which latter subject the celebrated Priestly was one of its diligent contributors.

From this as a parent stock, says the Rev. Dr. Miller, have sprung a number of similiar works in Europe and America. "The Medical and Philosophical Journal of London was commenced soon after the appearance of the Medical Repository, with the avowal of its editor that he took the hint from New York. Other editors in London, Paris, Edingburgh, and Bremen, in a short time started similar journals.—*New York Journal of Medicine and Surgery.*

On the Vesicating Properties of the Weevil. Extracted from the Inaugural Essay of Wm. M. S. Ridley, M.D., of North Carolina.

I propose offering to the consideration of the Medical Faculty of the University of Pennsylvania, the results of some experiments made by me for the purpose of ascertaining the vesicating powers of an insect, commonly known by the name of *Weevil*, and in Natural History by that of *Calandra granaria.*

A scientific description of this small insect may be found in the 12th volume of the Encyclopœdia Americana, under the head of Curculio. It is best known in the south from the great havoc it produces among crops of wheat and other small grain. Its ravages are not confined to the grain while maturing, but even after it is harvested the farmer encounters the greatest difficulty in expelling this intruder from his granaries.

The *Calandra granaria* is a native of Europe, whence it has probably been introduced into this country in the grain which has been from time to time imported. Immense quantities of the insect are now found in the southern parts of the United States; and its devastating influence is felt in all those sections in which grain is the chief article of cultivation. It may generally be found, in swarms, in beds of wheat, corn, rye, or oats, and more especially when the grain is garnered in warm barns, which have been in use for some length of time. It is not to be seen in the open air in autumn or winter, as it goes into winter quarters early in the fall, and is not out again until late in the ensuing spring.

In the fall of 1836, in the state of North Carolina, the author was overlooking some negroes, who were stirring and removing a quantity of wheat from one granary to another. This occasioned much disturbance among the insects. The weevil, in seeking a place of refuge, would alight, indiscriminately, in every direction, and particularly upon the bare necks and hands of the persons engaged in removing their beds. The negroes would either brush them away or crush them upon the surface. I noticed, on the subsequent day, that all those who had been thus engaged, were much spotted and blistered upon the parts of their bodies which had been exposed. This induced me to enquire of them the cause of the peculiar appearance, when one of the most intelligent of them informed me that it was a necessary consequence of thrashing, or otherwise interfering with wheat after it had been garnered. Being rather incredulous, I made some inquiries of intelligent farmers, who informed me that it was a fact which they had long noticed, but could not account for.

Having determined to investigate the affair, I made some experiments with the insects, and found that, upon being crushed upon the naked skin, they had the effect of producing vesications to a considerable degree. I also found that the effect was greatest immediately at the spot where the insect was crushed, and that the more equally the resulting fluid was diffused over the surface, the less was the injury done to the skin. These facts induced me to try the efficacy of the weevil as a vesicating agent.

Having collected some of the insects, and exposed them to the sun's rays, for the purpose of drying them, I prepared them into a cerate, according to the directions of the United States Pharmacopœia for "Ceratum Cantharides." A portion of this preparation I presented to my preceptor, Dr. James Ridley, with the request that he would employ it on the first opportunity, and inform me of the result. In a few days an opportunity was offered, and the cerate made from the weevils was substituted for the ordinary blistering cerate made with Spanish flies. It was found to produce identically the same effect as the latter, causing in a short time redness of the part, and in the course of a few hours, full vesication, without any symptoms of strangury. Since the time above adverted to, the author has had it in his power to employ the remedy only once; and, in this instance, it was desirable to obtain only its rubifacient action. The application was made over the epigastrium, and the effect desired was produced in a few hours. From these facts it may be inferred that the therapeutical operation

of the weevil, as an external remedy, is the same as that of the Spanish or potato fly. Its internal use may also be found identical, but the author has yet made no trials with it in this way. He only wishes to call attention to the subject, as it certainly presents an ample field for investigation, and may lead to curious if not useful results.

The only difficulty attending the investigation is that of taking the insects without injuring them, as upon this depends their efficiency as a remedy. The best method is to build up a large fire in the barn in which they may reside, when, if aroused from their beds in the grain and crevices of the granary, they will assemble in swarms towards the centre of the building, immediately over the fire, and will then fall down, either from the effects of the heat or from suffocation. After this, they may be collected and exposed for drying to the sun's rays. For use, they may be powdered, and treated precisely as the Spanish fly, in the preparation of the blistering cerate.

Extract from a Letter of Dr. Ridley, to Prof. Wood, of this City, dated Columbus, Georgia, Nov. 3, 1839.

Since obtaining my degree, I have continued to use the cerate made from the *Calandra granaria*, and it gives me much pleasure to assure you, that my expectations have been even surpassed. I am so fully convinced of its superiority as a vesicative agent over that prepared from the Spanish or potato fly, that I have adopted it in my practice, to the almost entire exclusion of the cerate in common use. My opinion is supported by numerous practitioners who have noticed its effects, and pronounce their preference for it over any other vesicating ointment they have ever used. It will produce a blister sooner than any other ointment, without those distressing symptoms so commonly attendant upon the action of cantharides.—*Medical Examiner, Nov.* 1839.

Dysentery.—From an interesting lecture by Dr. Gerhard at the Blockley Hospital, Philadelphia, we extract the following observations on the treatment of this disease.

"In the acute form of the disease, the treatment is sufficiently simple. The usual antiphlogistic means are required, with local applications to the inflamed mucous membrane, calculated to allay its irritability and remove its morbid secretions: these local remedies are narcotics and laxatives. In the prac-

tice of this hospital, especially during the present year, we rarely find it necessary to bleed. We give first a dose of castor oil, and then make use of the oily mixture. Calomel, either alone, or combined with opium or ipecacuanha, is by far the best remedy in severe cases; we sometimes also use ipecacuanha alone, or Dover's powder. In most cases mercurials are sufficient to effect a cure as soon as they produce ptyalism, when the symptoms of acute dysentery often cease at once. Half or a quarter of a grain of calomel, every two hours, will salivate in three or four days. It is usually combined with opium, to allay the griping, and prevent purging; or the pulv. ipecac. et opii may be employed in place of the opium, to effect the same objects. We have also frequently used ipecacuanha, either alone, or combined with opium or calomel. In the case of subacute dysentery before us, we have employed these articles, at times resorting to the acetate of lead, and various astringents, without much advantage: Dover's powder has produced the most benefit. In the acute case, we have administered half a grain of calomel, with three grains of Dover's powder, every two hours.

We rarely employ calomel as a *purgative* in this disease. We use it for a few days only, to produce its specific antiphlogistic effect—that is, until slight ptyalism is induced. If it is not then attended with good effects, it should be given up: a continuance of its use will do much injury, and tend to increase the ulceration of the bowels.

This is a peculiarity in the action of mercurials; in many acute imflammatory diseases, the advantages to be gained are when the point of salivation is reached, which is a test of the operation of the disease, and the system may then be regarded as saturated. I am quite convinced that if, from any peculiarity of the system, or from the disease assuming an unusual tendency to the spreading of the ulcerations, mercury should be administered after ptyalism has been produced without benefit, the patient is decidedly injured. The remedy is best adapted to the inflammatory forms of the disorder, and, as we shall presently see, is least fitted for the sloughing or malignant variety.

Of the particular remedies in dysentery, purgatives have been extensively employed. We have used many articles of this class; the best we find to be castor oil, which purges sufficiently to carry off the vitiated secretions, without producing much irritation. To prevent the oil from acting too harshly, and to lessen the irratability of the bowels, laudanum may be advantageously combined with it. The oleaginous mixture

is a good formula for their combination; of this we may give half an ounce every two hours, till it begins to act on the bowels. Rhubarb will also answer well as a purgative, and when the active symptoms have declined, the spiced syrup answers better than any other remedy. Venesection is sometimes required in acute dysentery, when the pulse is strong and corded; but we have not found it necessary in any case which has occurred in this hospital during the present year. The epidemic character of the disease has not been of the violent inflammatory character, which is a cardinal point in the diseases of the mucous surfaces, and seems necessary to the perfect cessation of the disease. I would not have you to misunderstand me, the term, restoration of the secretions, has been much abused and used vaguely. It means simply, in this case, to bring about the natural secretions of mucus, &c., in place of the diseased ones of blood and lymph. A certain set of remedies tend directly to produce this effect, and by restoring the natural secretions, they not only prove that the disease is ceasing, but they contribute to its cessation by producing depletion in the most effectual way, that is, through the natural emunctories of the part. Cups and leeches to the abdomen, along the course of the colon, are also frequently advisable; the latter may also be applied around the anus, for the purpose of drawing blood from the hæmorrhoidal vessels, and relieving the tenesmus. Warm fomentations are very often beneficially employed. But these measures, however important, cannot alone be relied on for the cure of the disase; we must restore the secretions to their healthy condition. This is a principal, though not the only object for which we employ calomel, with opiates, &c. The action of opium in dysentery is peculiar: in the first place, it allays the local pain and general irritability; and secondly, it quiets the spasmodic movements of the intestine, and thereby facilitates the process of cicatrization. But it may likewise produce bad effects; it tends to lock up the bowels, and prevent the discharge of the morbid secretions. To obviate this disadvantage we seldom use it alone, but combine it with castor oil, calomel, or ipecac. It may sometimes, however, be employed singly, either at the commencement or towards the close of the disease; but never during the height of the inflammation. Opium is also used by *injection*. In this city, opiate injections in dysentery have not been much employed till within the last few years; and in the country their use is still very limited, but in this hospital we are in the habit of using them very largely. From twenty to forty drops of laudanum may be

administered in this way, but not more, for dangerous consequences from time to time result from the frequent employment of large quantities of so powerful a narcotic, particularly when given by the rectum, in which mode of administration its action upon the brain is more irregular than when given in any other way. We usually inject twenty drops of laudanum mixed with a small portion of mucilage, every two, three, or four hours, according to the severity of the tenesmus, and the effects of the remedy; thus, if the stools cease, or if the mind becomes confused, dull, or the patient sleepy, its use should be suspended. There is still another way in which opium may be employed in dysentery; that is, by means of poultices sprinkled with laudanum, and applied to the abdomen.

Of the other remedies employed in dysentery, ipecacuanha, as we have already mentioned, is among the most useful. It is used either singly or combined with calomel or opium. A very effectual method of administering it, is in combination with extract of gentian and blue mass. This combination originated with Mr. Twining, and has been extensively and beneficially employed in India. It generally produces vomiting at first, but in a short time this effect ceases. We have tried it in one epidemic; its administration was followed by nausea and diaphoresis, and a considerable alleviation of the symptoms. It sometimes failed, but was generally successful. The proportions are, six grains of ipecacuanha, four of blue mass, and five of the extract of gentian.

Various other remedies have been employed in acute dysentery. They are principally depletions, such as saline purgatives, calomel in large doses, &c. These will doubtless answer in many of the ordinary cases of the disease.—*Ib.*

Extirpation of a part of a Rib for Neuralgia. By E. H. Dixon.

Oct. 16, 1838.—Jane Bailey, aged thirty, two years ago, was overturned in a carriage, and dragged something like a mile, receiving various contusions, and being taken out insensible. No lasting injury was the result, with the exception of a severe pain over the tenth rib of the left side, for which she received no treatment at the time, saving the customary bleeding practiced on such occasions. A few weeks after the injury, the affected spot became the seat of a small irregular projection, and of exquisite and constant pain. This pain I conceive to have been neuralgic in character, from the commencement, inasmuch as it was occasionally of equal violence

for weeks together, and not accompanied with other signs of inflammation. It would subside partially for a few hours and then recommence with such intolerable severity, that the patient assured me death was anticipated as a relief, to her misery. She had some little cough, with no expectoration; the cough I concluded to be the result of irritation, and constant loss of sleep, as I could detect no signs of pulmonary disease. The pain extended forwards and upwards, (from the projection which seemed to be near the sternal extremity of the rib,) over the stomach; upon turning her head and shoulders to the opposite side, so as to throw out the ribs, the projection was evidently caused by the end of the rib, as though the cartilage had been broken off. I at first thought it a fracture, with a redundant growth of bone, but, upon further examination, concluded the rib to be natural, though I could not account for its projection, without supposing a fracture to have occurred between the prominence and the vertebral articulation, thus destroying the natural curvature of the rib, opposing the action of the intercostal muscles, and favoring the absence of the cartilage; all this would sufficiently account for the projection. During the two years preceding the operation, the patient had been repeatedly cupped over the affected region, with momentary relief; part of this time was spent in the New York Hospital; her pain over the stomach being very acute; she had been treated whilst there for organic affection of that viscus. This, however, it seemed rational to explain, upon the principle of pain being continued from the irritated nerve, to its distribution; the anterior branch of the intercostal nerve going to the muscles and integument over the stomach. It was evident that counter irritation, however severe, would produce no benefit in such a case, and as the extirpation of the part of the nerve itself was impossible, without the certainty of opening the cavity of the pleura, I resolved to remove the projecting portion of the rib, hoping that when the tension was removed, the pain would cease.

I removed about two inches of the rib, by means of a very cautious dissection; leaving the cavity of the pleura unopened; the cartilage was not attached, being, most probably, absorbed. There was nothing peculiar or difficult in the operation; not a bad symptom ensued; the wound healed by adhesion in a week, the pain was removed instantly, and has not returned; the patient has gained twenty-three pounds of flesh, a sufficient evidence that a severely irritating cause had been removed.—*New York Journal of Medicine and Surgery.*

THE

WESTERN JOURNAL.

NO. I.

LOUISVILLE, JANUARY, 1840.

OUR ENTERPRISE.

In presenting the profession, in the Valley of the Mississippi, with the first number of a new Medical Journal, we are influenced by three facts — first, that there is not, at this time, a single periodical of the kind publishing west of the mountains, — second, that for most of the time since the year 1827, two have been supported in this part of the United States; and third, that such a work is needed by our physicians, for the double purpose of interchanging among themselves the results of their experience, and of acquiring from abroad, that information on the progress of discovery and improvement, which can only be obtained through the periodical press. That similar enterprises, with which we ourselves as well as others, have been connected, have gone forward with an interrupted movement, and even, at length, been suspended, does not in any degree discourage us; as such results are inevitable in a new country. Our motto is, NIL DESPERANDUM. We do not, however, intend to fold our arms in hope, but to rest our hopes upon them, and of course to secure success by those labours which only can command it.

Utility will be the object of our exertions, and to this end we respectfully invite the co-operation of our Western and Southern brethren. Isolated facts, reports of particular cases, histories of epidemics, bills of mortality, meteorological tables, and notices of dicovery in botany, zoology and natural history generally — every thing, in short, which can throw light upon the diseases, climatorial temperament and geological constitution of the vast intramontane platform lying between the lakes and the Gulf of Mexico, will be thankfully received and promptly inserted, if deemed of importance to the medical public. Wedded to no particular systems of pathology or therapeutics, we shall freely admit original facts and speculations of all kinds, provided they bew an aspect

of truth and utility. In thus throwing open our pages we shall not hold ourselves responsible for the verity or soundness of any thing not emanating from our own pens; though we shall at all times endeavour to exclude "false facts" and frivolous speculations. Under this rule, we have inserted, in the present number, a review, by one of our most able and authoritative collaborators, of the published lectures of a distinguished eastern physician, without inquiring whether or not the opinions of our learned friend are such as we could endorse.

Our connexion, and that of some of our associates, with the Louisville Marine Hospital, in which there are generally about fifty patients, will enable us to enrich our pages with many important reports on clinical medicine and pathological anatomy, of which a specimen will be given in the next number.

We have chosen the *monthly* form, as most correspondent to the taste of the age; which under the present improved modes of distribution throughout our own country, and of intercourse with Europe, can only be satisfied with early intelligence. This, by the visit of one of our collaborators, to London and Paris, we shall secure within a few months.

It only remains for us to add, that the present number has been brought out, under circumstances which precluded us from bestowing upon it the proper degree of attention; and that, although it contains some respectable papers from our correspondents, it is not equal in its general character to our wishes, nor, as we trust, a fair specimen, of the future numbers of the Western Journal of Medicine and Surgery.

YELLOW FEVER IN THE SOUTH-WEST

Most of our readers, are aware, that the past autumn has been calamitously signalized by the diffusion and mortality of this endemic of the Delta of the Mississippi, and the adjoining shores of the Gulph of Mexico. Those regions have, perhaps, at no previous time since their settlement by civilized man, been so severely and extensively scourged. From Florida to Texas along the Gulf, and up the river to Arkansas and Mississippi, most of the principal towns and many villages have been invaded. Within that extensive region, there are many able physicians who have been in the midst of the pestilence, on which, as to its ætiology and treatment they must have made a variety of new and important observations. We solicit for our journal the experience of the whole, and hope in successive numbers, to be able to present a full history of the epidemic. Meanwhile (although not rigorously professional) we offer to our readers, the following extract of a letter from the intelligent wife of a respectable physician in Mobile, giving an account of the ravages of the pestilence in that desolated city:

"Your letter of July 26th, reached me in August, just at the period when the banner of death was unfurled over our devoted city. A letter from you, my dear friend, is ever welcome, but your last letter was doubly so.

"For it came when my bosom was lonely and dark,
"Like the beacon's glad blaze to the mariner's bark,
"Like the sunlight that breaks through the clouds of the storm."

Sorrow and affliction were every where round me. Dr. L. was very ill of the Yellow Fever; and each day, tidings came to us of the death of friends. I am happy to tell you, my friend, that none of our immediate family have fallen victims to the fell destroyer. Dr. L. recovered, after a severe illness, and soon resumed the duties of his profession. Neither my father, mother, brother nor myself, has suffered from the fever. We are perchance the only persons out of 10,000 who have escaped a touch of the malady. I doubt not our exemption arises from our long residence on the Gulf of Mexico, where the yellow fever especially delights to dwell.

In June we had removed from Mobile to our country place, three miles from the city. But the country has been as much afflicted as the city; and pure air and verdant trees failed to insure health to those who fled from the pestilence. I am persuaded the annals of history offer no parallel to the affliction of Mobile, since the midsummer sun beamed upon us. The description of the plague of Athens, in the time of Pericles, or of the plague in London, in the seventeenth century, is a faithful picture of the yellow plague of this place, which has sent its hundreds to the silent tomb.

Words have not the power to shadow forth the fearful scenes of this season. In wretched holes have been found the lifeless bodies of husband and wife, with an infant striving to draw nourishment from the dead mother's cold bosom. Whole families were swept off as by an avalanche. The strong man, in his highest health, was struck down in a few days. The delicate female, the young child, the aged, the rich and the poor, those whose dwelling was the splendid mansion, and those whose lodgings were the cold ground, all, all, alike has the "insatiate archer death" numbered as his victims. Oh! my soul sickens at the anguish crowded into a few months.

When autumn came, hope whispered that its frosts would stay the steps of the destroyer. Alas! the very elements are against us. The earth is parched; no rains fall; and the sun has all the heat of tropical climes. Each day, I may say each hour, we hear of some valuable life that has passed away — some father whose large family looked in helplessness to him for their daily bread; some fond mother, whose little ones were supported by her daily toil. May God in his mercy, look down upon the new-made orphans of these fatal months!" D.

CLIMATE OF TROPICAL FLORIDA.

Abstract from the Metereological Register kept at Indian Key, T. F., by CHARLES HOWE, Esq., P. M., and Inspector of the Port. Thermometrical observations made at sunrise and 2 P. M. each day.

Explanation of the *initials* and *signs* at the *heads* of the *columns*. *c. d.* The coldest day at sunrise. *h. d.* The hottest day at 2 P. M. *v. m.* The greatest variation in one month. *v. d.* The greatest variation in one day. v. d. The least variation in one day. *r. d.* Rainy days or number of days in which showers fell. *m. i. r.* Monthly inches of rain or the number of inches of water thrown by the Pluviometer at the end of each month.

1836.	*cd*	*hd*	*vm*	*vd*	vd	*rd*	*mir*
January,	54	77	23	9	0	1	2.00
February,	50	81	31	11	0	1	0.64
March,	60	80	20	9	0	3	2.50
April,	71	83	12	5	0	4	2.00
May,	75	84	9	6	0	5	6.50
June,	78	88	10	8	0	4	3.50
July,	77	86	9	4	0	3	5.34
August,	80	86	6	6	0	4	1.69
September.	80	86	6	4	0	13	5.90
October,	74	85	11	4	0	2	3.86
November,	62	80	18	7	0	1	1.22
December,	60	78	18	10	0	0	0.00

1838.	*cd*	*hd*	*vm*	*vd*	vd	*rd*	*mir*
January,	64	82	18	7	1	1	0.20
February,	50	83	33	14	2	2	0.06
March,	62	82	20	10	1	1	0.30
April,	64	84	20	11	2	1	1.08
May,	70	87	17	10	2	3	2·40
June,	76	88	12	8	0	6	7.00
July,	80	90	10	7	2	1	2.40
August,	82	90	8	6	2	2	3.00
September,	78	89	11	6	1	8	7.10
October,	68	86	18	10	0	5	6.22
November,	67	84	17	8	0	3	7.10
December,	63	84	21	12	0	3	2.60

1837.	*cd*	*hd*	*vm*	*vd*	vd	*rd*	*mir*
January,	50	84	34	11	2	6	3.72
February,	51	80	29	10	1	3	1.10
March,	59	82	23	10	1	1	0.09
April,	65	86	21	9	2	3	2.00
May,	72	88	16	10	0	3	0.90
June,	76	90	14	9	2	2	3.10
July,	79	90	11	7	0	4	4.70
August,	78	90	12	6	2	5	6.75
September,	79	88	9	6	1	3	7.25
October,	61	88	27	6	1	5	8.75
November,	61	87	26	9	0	2	6 10
December,	62	84	22	9	2	3	2.12

1839.	*cd*	*hd*	*vm*	*vd*	vd	*rd*	*mir*
January,	54	80	26	12	0	2	0.08
February,	61	84	23	12	1	4	0.12
March,	59	84	25	10	1	1	0.02
April,	58	87	29	12	2	4	3.00
May,	76	88	22	9	0	11	6.90
June,	79	90	11	6	2	8	4.50
July,	80	89	9	7	2	8	7.60
August,	81	89	8	7	1	6	2.60
September,	78	88	10	7	2	4	6.50
October,							
November,							
December,							

GENERAL RESULTS.

	1836.	1837.	1838.	Oct. 1, 1839.
Number of clear days in the year	289	290	314	210
" cloudy " "	35	35	15	15
" rainy " "	41	40	36	48
Extreme hottest day " "	88°	90°	90°	
" coldest " " "	50°	50°	50°	
Greatest change in one month,	31°	34°	33°	
" " " " day,	11°	11°	14°	

Number of rainy days in *each rainy season*, from the 1st of June to the 1st of October, each year.

24	14	17	26

that is the number of days on which showers fell, because there is never an entirely rainy day; and because the showers mostly fall by night. N. B. In the first nine month of the present year it should be noted that the showers have been uncommonly numerous and have occurred at unusual times.

To Professor DANIEL DRAKE.

INDIAN KEY, TROPICAL FLORIDA, 28th October, 1839.

DEAR SIR:

I respectfully transmit to you the above abstract from the Meterological Register kept at this miniature Islet (of 12 acres) during the whole period of the Seminole war by Charles Howe, Esq. P. M. These indisputable evidences of the usual weather in Tropical Florida ought to demonstrate, that in South Florida, military operations against the savage Seminoles could have been continued throughout the whole summers, as well as at all other seasons of these years, from the 1st January, 1836, to 1st October, 1839. As a patriotic physcian it has become my indispensable duty—1st. To re-affirm boldly the positive fact, that below 26°, South Florida, with its *peculiarly tropical air*, irrefutably enjoys the *most healthy climate* in the U. States. 2d. To announce firmly the additional fact, that South Florida, with its *exclusively calcareous earth*, also possesses the *most healthy soil* in the United States; and 3dly, to invite earnestly my medical brethren, to *publish speedily* every fact and every argument which can or may be brought, or which may be thought, to show, that either in climate or in soil, South Florida is not the healthiest district in the Union.

Very respectfully, your ob't serv't.

HENRY PERRINE, M. D.

DEATH FROM THE INHALATION OF THE VAPOUR OF THE BI-SULPHURET OF MERCURY.

A patient in the surgical ward of the Louisville Hospital, labouring under a venereal ulcer of the palate, was directed to use mercurial fumigation, which he did, in the manner and to the degree, usually practised in the ward, but it proved fatal to him in less than half an hour. A detailed report of the case with the *post mortem* appearances will be given in our next number. D.

MILK SICKNESS, *alias* SICK STOMACH.

THIS endemic of the West, to which science has not yet given a name, and even sometimes professes to doubt the existence, continues to attract the attention of the people and country practitioners, in various parts of Ohio, Indiana, Illinois, Kentucky and Tennessee. Sometime since, we received two communications concerning it. One from Miami county, the other, accompanied with specimens of a plant supposed to be the remote cause, from Fayette county, in the State of Ohio. The former by an intelligent but non-professional gentleman, presents as the poisonous plant, supposed to produce the disease, the *Rhus radicans*; but as this vine grows universally in the West, while the malady in question, is limited to particular spots, we cannot concur in the hypothesis. The plant transmitted to us by the latter, is the *Eupatorium ageratoides*, found *every where*, in our fertile woods; and, therefore, not likely to be the cause, of a disease perseveringly limited to certain localities. Moreover, judging it by the taste, it is quite inert; and indeed the whole genus to which it belongs, except the *perfoliatum*, appear to be destitute of active qualities, and that species, is by no means of a noxious character.

In connexion with this subject we record the following fact. In the month of July last, about twenty of the boarders, in the Hotel of Mr. Madeira, Chillicothe, Ohio, were attacked, in one, two, or three hours after breakfast, with nausea and vomiting. In some, the latter was violent, and accompanied with spasms of the stomach, and a degree of prostration, from which they did not entirely recover for three or four days. Of course, this affection was ascribed to something eaten at the table, but the only article taken by the whole, was *butter*; and that butter, it was ascertained had been brought from an adjoining county in which the milk sickness prevails. Many facts of this kind have been reported by the people in different parts of the West, but, generally, discredited by the profession. We beg leave to commend the whole subject to our country friends, and shall be happy to give publicity to their observations and experiments. D.

TRANSLATION OF TROSSEAU AND BELLOG ON LARYNGITIS.

We are happy to perceive that one of our Collaborators, Dr. Warder, of Cincinnati, has translated and published in the valuable "Select American Library," of Professor Dunglison, the interesting work of Trousseau and Bellog on Laryngitis; which we beg leave to commend to our readers, as containing much new and important information, on an increasing variety of pulmomary disease. The readers of the *Western Journal of the Medical and Physical Sciences*, will recollect the instructive analytical review of that work, made by Dr. Warder, and published in the 11th volume. As far as we recollect, his translation of this volume from the French, is the first which has been made of any extended work, by a Western physician. D.

GROSS' PATHOLOGICAL ANATOMY.

Dr. Gross, professor of *General and Pathological Anatomy and Physiology*, in the late Medical Department of the Cincinnati College, is about to appear as the author of a system of Pathological Anatomy, in two volumes, illustrated with numerous colored plates. It was issued from the Boston press in the month of November, but has not reached us. Our knowledge, however, of the eminent qualifications of the Author, inspires us with confidence in his work, which we have no doubt will present all the important facts, in this new and interesting branch of Medical Science, down to the present time; and it is creditable to Western Medicine, that it should have given to the profession the first separate and systematic treatise on morbid anatomy, in the United States. When received we shall make it the subject of a more extended notice. D.

SCARLATINA SIMPLEX.

For several years past, different varieties of Scarlatina have prevailed, some where in the West. In one year, one town has been affected, in another a different place. In degree, it has varied from high and fatal malignancy, to extreme mildness. During the present winter in Louisville, it has assumed the latter character, presenting itself as a slight febrile affection, with moderate tumefaction of the glands and ganglia of the throat and neck, followed in several cases by œdema of the lower extremities. In some families most of the children have been, either simultaneously or successively affected. We shall be happy to receive for publication, an account of this epidemic, as it has latterly shown itself in the West. D.

LOUISVILLE MEDICAL INSTITUTE.

THIS institution was opened for medical instruction in the fall of 1837, Drs. *C. Caldwell, J. E. Cook, H. Miller, J. Cobb, J. B. Flint, and L. P. Yandell*, composing its Faculty, the first season; to which Dr. C. W. Short was added the next spring, and Dr. Daniel Drake in September, 1839—making in all eight Professors, namely, of the *Institutes of Medicine and Medical Jurisprudence, the Theory and Practice of Medicine, Obstetrics and the Diseases of Women and Children, Anatomy, Surgery, Chemistry and Pharmacy, Materia Medica and Medical Botany*, and *Clinical Medicine and Pathological Anatomy*. The number of students the first winter was 80; the second 120; and the number in attendance upon the present course of Lectures is 204, showing a rapidity of increase altogether unprecedented in the history of American schools of medicine. By the munificence of the city of Louisville, a splendid and most commodious edifice has been erected for the Institute, and from the same source, it has been furnished with a large and well-selected library, chemical apparatus, &c. &c. The Marine Hospital affords to pupils the most desirable opportunities for studying disease at the bed-side, and the extensive commerce of the city opens a wide field for the study and practice of operative surgery. The peculiar advantages of Louisville as a site for a school of medicine, have long attracted the attention of medical men, and it seems to be universally conceded, that it must be the seat of one of the great schools, which the population and wealth of the Valley of the Mississippi may naturally be expected to create and sustain.

Favored by so many natural resources, and so amply furnished with all the materials and apparatus for teaching, it was to be expected that the growth of the Institute would be rapid, nor under a wise and and able administration is there reason to doubt that its prosperity will be enduring. From Kentucky it has hitherto derived a larger number of students than from any other state, but the increase from Tennessee, Alabama, Indiana, Mississippi, Illinois, and Missouri has been great. From one of those states the number, this year, is about fifty, and from fifteen to nearly thirty, from two or three of the others. In the past success and future prospects of the school there is everything to stimulate the Faculty to high and persevering exertions. Y.

TO CORRESPONDENTS.

We hope our old correspondents of the W. J. of the M. and P. S. and of the L. J. of M. and S. will not forget us in our new enterprise.

Our next number will contain reports of cases treated in the Louisville Hospital, and papers from Dr. Gross and Dr. Monette, the latter on the autumnal fevers of the State of Mississippi.